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TUBERCULAR STOMATITIS.

BY A. E. MACGILLIVRAY, M.R.C.V.S., BANFF, N.B.

My communication in the Journal for January last on the above subject has, it seems, attracted public notice both at home and abroad; besides which, I have had some private correspondence in reference to it. It will be remembered that my attention was drawn to the matter by perusing the writings of a French veterinarian, M. Lenglen, on this disease, which he was pleased to style *Gangrène de la bouche des veaux*. For various reasons, I saw fit to substitute the designation of *Tubercular Stomatitis* for that of M. Lenglen.

In the *Recueil de Médecine Vétérinaire* for 30th January last, the well-known French veterinarian, M. E. Decroix, in his "Revue de la Presse Étrangère," gives a synopsis of my communication and invites further discussion of the subject.

In the *Veterinarian* for March, Mr. Alex. Gunn, M.R.C.V.S., Balloan, Beauly, N.B., chronicles his experience of this disease, which tends to confirm my own ideas as to the same.

In the *Recueil* for 30th March, M. E. Decroix again returns to the subject, and refers to the communications of M. Lenglen, Mr. Gunn, and myself.

Having made these prefatory remarks, I must now ask you to allow me space for the further discussion of this hitherto neglected or overlooked, but sufficiently interesting disease; and in proceeding to extend the available details on the matter, I may premise that the points seemingly at issue between M. Lenglen and myself are—(1) whether this peculiar Stomatitis in young

cattle is identical with the Gangrenous Stomatitis of children; or (2) whether it is rather of a purely tubercular nature; and (3) is it contagious or otherwise?

In my former communication, I deny the identity of this affection in calves with the black Gangrenous Stomatitis so fatal in children; and I confess that further experience of the disease in calves only confirms this opinion of non-identity, and tends to render its tubercular nature more and more apparent to my mind. Its occurrence in animals with a tubercular diathesis is fully borne out in Mr. Gunn's communication, which is remarkably clear and explicit on this point.

As a matter of course, it cannot be denied that M. Lenglen does not exactly enter into the question of its tubercular nature; but he distinctly asserts its non-contagiousness, and this is almost equivalent to non-tuberculous.

I think what new material I have got to bring forward will be best made public by giving the details of a few instances of the disease which have recently come under my notice, either in practice or otherwise.

First.—The cases referred to by Mr. Gunn, as lately occurring in his practice, are extremely valuable, as they all happened in animals of decidedly tubercular diathesis. There were four attacked and under treatment *at once*, but Mr. Gunn does not say whether he suspected *contagion* as the means of its spreading to four, or that it was because the patients were all inherently tubercular. On privately communicating with Mr. Gunn, however, I find that all the four recovered; but that since recovery one of the four had become the subject of a large tubercular deposit in one of the glands about the throat, for which it is at present under treatment externally. This is sufficiently conclusive to merit publication. I have mislaid Mr. Gunn's lettter, so I cannot specify which gland has become the seat of tubercular deposit; the fact, however, remains that Mr. Gunn predicted that the patient was decidedly the subject of latent tubercle, and he was right.

Second.—I have lately had two calves at one farm under treatment for this disease: one, with diseased gum at the anterior part of inferior maxilla, has recovered; but the other, with dis-

eased middle third of tongue laterally, is still under treatment, having proved a most inveterate case.

These calves were tied up together in one stall, but as one of them began to show signs of indisposition, it was set at liberty to run about as it chose; by-and-by saliva began to dribble continually from its mouth, and after a fortnight or so I was asked to see it. The general appearance of my patient at once led me to suspect the nature of the disease; in fact, I said so to the owner when he called for me and explained the symptoms. The disease was located about the posterior part of middle third of tongue, laterally; and after excavating a very large lump of the usual yellowish cheesy-looking deposit, an ulcerous sore remained of the following dimensions, namely, one and a half inches long, one inch broad, and fully half an inch deep; thus making rather a formidable sore in the poor little creature's tongue.

In the course of three days this ulcerous excavation got well-nigh refilled with the same "cheesy" deposit: this, in my opinion, was chiefly owing to the want of proper dressing, for I can never get any attendant to be *rough* enough in the daily dressing of such sores. The cheesy deposit, either at first or as reproduced, *must* be clean scooped, scraped, or cut out, no half-measures will do.

The second calf, now recovered, without doubt contracted the disease from the first one: they were tied up in close proximity, in contact with each other; and about a fortnight after the first was untied and allowed freedom, the second was attacked or showed symptoms of the disease at the roots of incisor teeth, anterior part inferior maxilla. Here the diseased product was very easily got at, and consequently only required two scrapings to effect a cure.

Third.—Not long ago a rather serious outbreak of this affection occurred at a large farm on this coast. Among the cows, and at times younger stock, on this farm, Tuberculosis every now and again crops out, and those attacked generally either go at once to the butcher or are ultimately put under ground. A cow coming near parturition got uncommonly bulky and very breathless; so much was this the case that I was asked to look at her. On examination I found no difficulty in declaring Tuber-

culosis and uterine dropsy, the latter no doubt depending on the former. This cow calved shortly after I saw her, and a week or two afterwards it had to be put out of the way.

I must also note that at same time another cow showed signs of tubercle about glands of throat, calved, and was fed off.

The first cow's calf, when about three weeks old, became the subject of Tubercular Stomatitis in the posterior parts of mouth; and *within a fortnight* other five calves were attacked with the disease in various parts of mouth, tongue, gums, cheeks, etc. Ultimately all recovered.

An interesting point arises here in reference to the origin of the disease in this outbreak, namely, as to whether the disease (tubercular) was inherent in first calf and communicated by it to the others; or were the whole six contaminated by the milk from the two tuberculous cows? The mother of the first calf was in a very advanced stage of Tuberculosis, and though I don't think the calves got much of her milk, still some was used, and, however little, was quite sufficient to leave the tubercular contagium wherever it went.

If the disease was communicated to the calves by the milk, the question presents itself as to whether the use of the same sort of milk may not account for the occurrence of certain cases of sore throat or mouth in the human consumer. Isolated cases of sore throat often occur among farm-servants, where ugly-looking yellowish spots or deposits are found in various parts of throat and even mouth, requiring a good deal of brushing and dusting with very strong caustics. The subject merits investigation.

Fourth.—While differing with M. Lenglen as to the nature of the disease described by him, I must allow that, my conclusions being partly built upon the mere details of the disease as seen by him, it is quite possible that he *may be* describing a different Stomatitis from that observed by me; still, when we take into consideration the class of patient, the parts affected, and the general symptoms, it must as assuredly be allowed that there seems to be extremely little grounds to question the fact that *we are both* discussing one and the same affection. To my mind the thing is self-evident. The connection between the Gangre-

nous Stomatitis of children and the Tubercular Stomatitis of calves begins and ends in the fact that *they* (merely) *both attack the same parts.*

The tubercular nature of this affection in calves is proved by the details given *ut supra*, and by a close microscopical examination of parts of the cheesy material taken from the tongue of the calf at present under treatment. This is simply indisputable.

That the Tubercular Stomatitis of calves is contagious, is amply demonstrated in this communication; for whether we consider it as passed from calf to calf in the cases chronicled, or as conveyed to the whole by means of the milk, the fact still remains that it is transmissible. For my own part I firmly believe that one calf conveys it to the other, not only by actual contact, but also if the calves are sucking the same cow or getting their milk out of the same dairy utensils, as often happens.

The contagium of tubercle is specific, and produces its like wherever it becomes deposited. Whether, therefore, the contagion comes from the milk originally, or from calf to calf, if it gain access to mucous membrane of cheeks, gums, tongue, or throat, it produces in a more or less aggravated degree the *Tubercular Stomatitis* which I have endeavoured now and formerly to describe.

Allow me, in conclusion, to correct a slight error in the communication of M. E. Decroix for 30th January. He says I prescribe the sulphate of soda (sulfate de soude) internally; this is a mistake with a good deal of a difference, for it is the sulphite of soda which I use internally in all such cases.

Can no other veterinarians, in country practice, favour us with their experience or ideas on this disease?

AN INTERESTING CASE OF NEEDLE-SWALLOWING IN A DOG.

BY ROBERT WARD, F.R.C.V.S., LONDON, W.

THINKING the following case would interest the readers of the Journal who are fond of canine practice, I pen these remarks from my note-book.

On Sunday afternoon, March 6th, 1881, I was requested by

Colonel Judd, of Oxford Gardens, W., to make an early visit to see what was the matter with a pure-bred bull-bitch—an animal always cheerful and good-natured, but now suddenly depressed, refusing all food and liquids—indeed, appearing quite unable to swallow.

The throat had been examined, but no foreign substance could be seen; it was therefore thought she was suffering from a violent sore throat and cold—the result of exposure during the past inclement weather, as she was kennelled in the garden at the rear. She had not been bitten by any other dog—indeed, could not, being kept strictly isolated, because of her pugnacious proclivity.

On my arrival I found the patient lying quietly before the fire, in a somewhat lethargic condition, respiration natural, eyes bright, but seemingly indifferent to what was passing around, or to the presence of a stranger. Having watched my case for a few minutes, I had her quietly placed on a table near the window, and then proceeded to make my examination. Externally, I found considerable swelling around the throat, with tumefaction in the sublingual space. On opening the mouth, I found the dorsum of the tongue much swollen, and its posterior surface inflamed; the fauces and laryngeo-pharyngeal region highly congested in patches. Pressing the tongue, I found at its base a discharge of a kind of pus, saliva, and blood; it was impossible to see from whence this discharge actually issued.

At this stage of the investigation I inquired how long the animal had been ailing, and was assured she was all right the day previous, apparently, and that all came on suddenly. I then asked about the food, and was assured *here* she could not have had *bones*, for these were not allowed.

I then released the bitch and watched her; she appeared quite sensible, walking quietly to the fire, stretched herself before it as before, on my entry. This being so, and the absence of other physical indications of "dumb madness" (which I confess I at first considered my patient was suffering from), I prescribed for a case of Laryngitis—*i.e.*, Liq. Ammon. Acetas et Belladonna Tinctura, with Pulvis Ipecac. Compositas. Embrocation to the throat after fomentation. Diet, raw eggs beaten up.

On Monday, 7th, I visited my patient again, found her just as quiet, throat much swollen externally, and unable to swallow; opening the mouth, I found the tongue posteriorly much more swollen, and on pressing the dorsum with my large forceps, I detected the discharge of matter and blood again. I repeated my treatment, and ordered the eggs to be given, as the poor thing could not take anything herself.

On Wednesday, 9th, I saw the patient again. The swelling around the throat was reduced, but under the jaw, in the sub-lingual space, I detected an abscess forming, so ordered a linseed-meal poultice to be applied, and continued for forty-eight hours till I saw the patient again.

On the morning of Saturday, the 12th, I visited my patient again, and the Misses Judd, immediately I entered, handed me the needle and thread I inclose, which they had extracted the day previous from the abscess under the jaw. On the Thursday, when renewing the poultice, a piece of *something* was noticed hanging from an opening in the abscess from which matter was discharging; it was pulled, but seemed so firm it was left and the poultice applied. The next day, Friday, when the poultice was removed, the *something* was pulled again, when, to the astonishment of every one, the needle followed the *something*, which *something* proved to be *thread.*

I ordered the mouth to be gargled with Condy's Fluid, and succulent diet.

On Wednesday, 16th, I saw the patient; she was as lively as formerly, and appeared nothing worse for the suffering she must have endured.

The question is how long had the needle been *in situ.* It must have entered eye end first, doubtless the thread being gathered up, for the point of the needle was anteriorly situated, that is, pointing towards the tongue's apex. This I will leave your readers interested, to cogitate upon.

NOTES UPON HORSE-BREEDING IN THE PUNJAB, INDIA.

BY J. J. MEYRICK, VETERINARY SURGEON, 1ST CLASS, ARMY VETERINARY DEPARTMENT, WOOLWICH (LATE ASSISTANT SUPERINTENDENT OF HORSE-BREEDING FOR THE PUNJAB).

THE horses of the Punjab, excluding ponies, are of one general type, modified here and there by admixture with other breeds, such as Persians, Arabs, or Kabulis.

Their most common characteristics are: rather long, narrow, and plain heads, with an inclination to Roman noses, shoulders deep and fairly oblique, chests deep, barrels and loins good, quarters broad enough, but far too drooping, and not so muscular as they ought to be in proportion to the rest of the body. The fore legs are too small under the knees to suit English notions, though it must be confessed that they rarely fail with the work which native horse-owners give them. The feet are usually good and sound, but frequently more or less out of shape from neglect. Most of the work being on unmetalled roads, they are seldom shod.

Sickle-shaped hocks, and the toes of the fore feet much turned out, are very common defects. The degree to which these malformations prevail varies in different parts of the country, being, as might be expected, greatest in those districts where it is customary to confine the animals very much, and least in the places where they have more freedom. Even in the best districts, horses with toes turned out are numerous, chiefly in consequence of the want of sufficient exercise in early life, which prevents their chests growing to the natural width.

I am inclined to believe that sickle-hocks have become to a great extent hereditary, owing to horses having been for generations past ridden with spiked bits, which force the animals to throw an excessive amount of weight upon the hind legs. Their heads being tied down with standing martingales, they cannot escape the full action of the bits, and although natives of India ride with loose reins, the horses, knowing that the slightest pull will force the spikes into the bars of their mouths, move with

the haunches very much under them. This produces a cramped hind action, even in those which use the fore legs freely; and Spavins or sprained hind fetlocks are the most frequent causes of unsoundness.

In the large desert tracts of the southern Punjab, horses are both better shaped and more sound than in the north. This is attributable partly to the fact, that before the conquest of the country by the British, the natives of those tracts lived to a great extent upon plunder, and required for making their raids the best and soundest horses procurable. Another reason is that, owing to villages and towns being long distances apart, the owners of mares necessarily give them a great deal of steady exercise; thus keeping their bones, ligaments. and tendons in constant training, which renders them less yielding and less liable than they would otherwise be to injury when suddenly called upon to bear an unusual strain.

I should have mentioned before that nearly all the land-owners keep mares only for riding, both on account of their tractability and the profit of breeding from them. During a journey they seldom go at a faster pace than an amble of four to six miles an hour, and as the foals generally accompany their dams, they grow up with hard legs and feet.

On the whole, however, the young animals do not have nearly sufficient regular exercise. Few of the cultivated fields being fenced, it is customary to confine even the fillies while the crops are growing; and as the natives have a great objection to castrating horses, the colts are constantly tied with head and heel ropes from the time when they begin to be troublesome with mares. They therefore show the bad effects of deficient exercise to a much greater degree than the fillies.

Up to two years of age they are about equal in power and freedom of movement. At three the fillies are well grown, while the colts have half-developed frames and cramped action. At four years the latter have narrow chests, quarters of far less than the natural width, and the most miserable action conceivable; fillies of the same age being finely made, and free movers, considering the bits with which they are ridden.

The country-bred stallions having been reared in such an un-

natural manner, it may easily be imagined how many defects they must transmit to their offspring. The Punjab mares are usually from 14 to 15½ hands high, occasionally reaching to 16 or more. The best are generally from 14½ to 15 hands. With all their faults they are well bred, very hardy, and capable of long continued work upon scanty food and under a hot sun. There is no doubt but that they could supply plenty of good, useful remounts fit for European cavalry if furnished with properly-selected stallions, and if the produce were reared in a rational manner. Since the abolition of the Bengal studs, the Indian army has had to depend more and more every year upon Australia for the remounts required by the British cavalry and artillery. The Australian horses have plenty of power and fine action, but they require much more food than country-breds or stud-breds, and are considered by most men who have tried them to be unfit for hard work in India during the hot season. Moreover, their purchase necessitates sending a serious amount of the public revenue out of the country annually.

After being bought they are kept in a depôt for about a year, in order to become acclimatised. This, together with the remount staff in Calcutta, and the railway journey up country, adds materially to their cost before they are fit for service in the ranks.

Government is, therefore, naturally anxious to improve the native breeds of horses, in order to purchase as many remounts as possible in India itself. For several years past, some imported stallions have been supplied to a few districts in the Punjab—but it is only within the last five years that they have been sent in large numbers. In those places where they have been used for a considerable time, there is a marked improvement in the horse stock. When inspecting a crowd of brood mares and foals, it is easy to pick out those of the latter which have been got by government stallions, and frequently even to name the sire, so much do some of them stamp their likeness upon the produce. The grown-up fillies, too, which are kept for breeding purposes are usually greatly superior to their own dams. The stallions are stud-breds, Arabs, English thoroughbreds, Australians, and Norfolk trotters. Of these the stud-breds were at first very suc-

cessful, their stock for some years winning more prizes at the horse-shows and fairs than that of any other breed. There has lately been a falling-off in this respect, owing partly to the fact that most of the horses are growing old.

Many of the Arabs get excellent stock, but, unfortunately, it is difficult to procure a sufficient number of stallions of the right sort. Experience has proved that broad, powerful frames and large bone are more essential than even high caste, and Arabs of the highest caste who were deficient in those qualities have often shown very inferior produce.

Another drawback to the use of Arabs is that a considerable proportion of their foals grow into horses pretty and well shaped, but too small for ordinary remount purposes. When of sufficient size it is difficult to find anything equal to them for light cavalry on account of their extraordinary hardiness.

In the Bengal studs some of the most successful stallions were those got by Arabs out of stud-bred mares.

The Australians used in the Punjab are of nearly or quite English thoroughbred blood on both sides. Some of their foals have turned out well, but they have hitherto been too few in number to allow of a correct judgment being formed.

The English thoroughbreds are, as a general rule, a great failure. For some unknown reason they do not nick well with the mares of the country. A finely-made, compact thoroughbred, when put to a really good mare, usually produces a leggy, weedy, miserable foal. The exceptions to this are mostly in the southern districts, where the stock is well looked after, and allowed considerable freedom. *It is certain that the produce of the thoroughbred, more than that of any other breed, requires plenty of food and exercise in order to develop into a good horse.*

The Norfolk trotter, when well bred, has been of late years by far the most successful stallion. He counteracts more than any other the most common defects of the Punjab mares—viz., smallness of bone, turning out of toes, poor hind-quarters, sickle-shaped hocks, and cramped action. His stock resists to a great extent the ill effects of the confinement and small allowance of food to which so many of the native horses are subjected. The trotter himself, owing to his formation and temperament,

keeps in good condition upon much less food than the thoroughbred, and no doubt transmits this peculiarity to his offspring. He also, which could hardly have been expected, bears the heat of the Punjab without distress.

In the selection of brood mares, the following rules are observed by the assistant superintendents of both the Punjab and north-west provinces:—

1. The mares are not to be under about 14½ hands high.
2. They must not exceed 14 years of age.
3. They must have frames at least fairly developed, and safe action.
4. They must have no unsoundness likely to be hereditary.

Any mares coming up to this standard can receive the Government brand, and be covered free of charge after they are four years of age.

During the first few years after the introduction of this system, great numbers of the landholders refused to accept the brand. Before the Punjab was conquered, it had been customary for a native prince to supply stallions, and frequently to seize the best of the produce for his own use. In many places the landholders were afraid that the British Government might act in the same way, and it was often necessary, during the first year or two, to pass and brand inferior mares belonging to those who were willing to run the risk, in order to give confidence to the great mass of the horse-breeders. These suspicions are now almost entirely set at rest, and in nearly every part of the country the owners of the best mares are anxious to have them branded. During the three years between 1877 and 1880, the number of mares on the lists increased from 1,500 to 4,500, and others are constantly being added. They are supplied with stallions at the rate of one to every forty or fifty mares.

The chief difficulties encountered by the Horse-breeding Department are:—

1. The great objection to castrating colts, and the custom of keeping them tied up without exercise, except when ridden occasionally.
2. The dislike of even rich breeders to the trouble of keeping colts until full-grown.

3. The want of sufficient food for horses under the present defective system of agriculture. The produce of Government stallions being greatly superior to that of the country-bred, is eagerly bought at from one to two years of age by native dealers, who annually take hundreds of the best young animals from the Punjab to the more southern parts of India, and after keeping them for a year or two, sell them to the native gentry and to princes of the independent states.

One reason why the Punjabis dislike keeping a number of young, growing animals, is that, excepting at certain seasons of the year, horse food is limited in quantity. During, and for some time after the rains, there is, of course, a plentiful supply of grass.

When certain crops, such as millet, are reaped, the stalks are given to the horses, and last for weeks or months.

For five or six weeks before the green wheat blooms, it is cut daily, and horses are fed upon it, becoming glossy in their coats, and very fat.

At other times forage is often difficult to procure, and it will never be plentiful during the whole year until the natives can be persuaded to grow green crops, such as lucerne, and to make hay at the latter part of the rainy season. It is sometimes stated that the climate of India is not adapted for properly curing hay, but in the years 1879 and 1880 I tried the experiment on an extensive scale, and with perfect success, collecting several ricks for the use of the Government stallions in the depôt at Abbottabad.

Mr. Hallen, general superintendent of horse-breeding, has for some time past endeavoured to induce many of the large landholders to enclose tracts of grass land, and keep colts loose upon them until three or four years of age. He has supplied the various breeding districts with castrators, who are paid by Government, and are bound to operate without charging. In order to encourage the breeders to have their colts castrated, he is annually increasing the prizes for geldings at the horse shows, and diminishing those for entire animals.

If these endeavours ultimately meet with the reward they deserve, the result must be that the country will furnish a

plentiful supply of useful remounts; but the natives of India are eminently conservative in their ideas, and time is required to induce them to adopt new customs.

The climate and soil of the Punjab are well suited to horses, and it is to be hoped that the obstacles to the success of the work now carried on by the Government will gradually be overcome. Under the most favourable circumstances, five years would be far too short a period for effecting any great and widely-spread improvement.

CEREBRO-SPINAL MENINGITIS IN THE COW.

BY JOHN GERRARD, M.R.C.V.S., ROMFORD, ESSEX.

FOR some time past I have been puzzled to ascribe to its proper class or cause, a peculiar nervous affection of the cow, occurring from nine days to six weeks or more, after parturition; simulating what is known as Parturient Apoplexy, and sometimes after recovery from it.

It is not a very common affection. In two years I have had about ten cases, half of which recovered, while the others were either killed lest they should die, or died suddenly when they were thought to be convalescent.

Our literature—even in this, its stirring day—is remarkably reticent, if not altogether mute, on this subject; and having had an opportunity of making two *post-mortem* examinations, I venture to send particulars, for the criticism and comment of your readers, should you deem them worthy of publication. If we reflect on the complexity of functional activity of the brain and spinal cord, the peculiar vascular supply thereto—especially in ruminants—the difficulties of ascertaining positively the physiological and pathological changes in the various cerebro-spinal areas, against which we have so frequently to dash our mental energies in vain,—it may not, perhaps, be considered presumptuous in me to ask the record of the following facts bearing thereon; as perchance they may serve as a guide-post, or act as a stimulant to abler and more favoured inquirers in this dark but fertile field.

As students, especially of the nervous diseases of the lower animals, we labour under very manifest disadvantages in not being able to interrogate our patients as to the seat of pain, its kind and commencement, etc. We have to judge from the symptoms manifested, and by associating these symptoms with certain *post-mortem* lesions or appearances, conclude that the disease has been caused by some irregularity in the vascular supply, but the cause of the irregularity we are unable to descry. Besides, the lesions and appearances of the brain and spinal cord are frequently such as to make it extremely difficult to say this is health and that is disease, more especially in congestive and apoplectic conditions. When the vital spark has to fly from some human organism in consequence of such a condition, the medical attendant simply certifies to the fact, without in any way being interrogated as to the cause, or reproached as to his inability to cure it; and the sorrowing relatives solace themselves, and seek shelter for their ignorance in the decrees of Providence. Not so, however, with the Veterinarian. He is called upon to explain the cause and condition, and is reckoned of little use unless he can expurge the perilous stuff that frequently works such havoc among his patients and ruin among his clients.

A case of this nature has just occurred in this county, in which a farmer has lost some eight horses, by some new disease, it is stated, and notwithstanding all the veterinary skill in the county, and three visits of a professor from the Royal Veterinary College of London, it is still a mystery, "defying, as it does, all power of diagnosis and cure, and science has on and up to this point been entirely beaten." So says the *Essex Weekly News* of April 8th.

I digress, however. From the appearances presented, as also the symptoms manifested, I have ventured to term this disease in the cow, *Cerebro-spinal Meningitis*. Whether I am right in so designating it, must be left to the judgment of more competent pathologists and practitioners. Sometimes it assumes an apoplectic character, judging from the suddenness of the attack and termination; while at other times it is undoubtedly of an inflammatory type; but as the latter may frequently lead to the

former in disease of the nervous system, it is probable that it is only different stages of the same affection; the early or inflammatory stage not having been observed.

Case I.—A fine six-years-old, pure-bred alderney gave birth to her fourth calf; did well up to the ninth day, on the morning of which she was observed to stagger, and to fall when moved out of the box, soon, however, getting up again. There were an excited appearance, blood-shot eye, breathing normal, bowels slightly constipated, capricious appetite, quantity of milk diminished, a peculiar twitching of the muscles of the fore extremities, together with the inability to walk without staggering, and the excited look—these were the prominent, and they might be said to be the pathognomonic, symptoms of the disease.

The bowels responded to an ordinary purgative in twelve hours, when she seemed duller, and did not feed so well, but could walk better. She improved in appetite with the use of vegetable tonics three times a day, counter-irritation on the spine and poll; and on the evening of the fourth day she seemed convalescent. Next morning, however, she was found dead, evidently without a struggle.

Post-mortem examination: The surface of the body, generally, presented a congested appearance. Contents of the abdomen healthy, with the exception of the kidneys, which were enlarged, soft, and vascular. The contents of the stomachs and bowels were normal, as were also the mucous membranes and mesenteric glands. Uterus enlarged, and contained about a quart of coffee-coloured fluid; cotyledons large and spongy, although the retrograde metamorphosis might be said to be well advanced, considering the time and condition. Bladder healthy. Heart and lungs gorged with blood, but no symptoms of previous disease, or any abnormal condition, with the exception of the mechanical hyperæmia.

On disarticulating the head, a large quantity of flocculent sanguineous fluid escaped, probably about a pint. The membranes generally were congested, and the sub-arachnoid cellular tissue infiltrated with serum. The cranial portion of the dura mater was more easily detached than usual. The spinal canal contained a quantity of serous effusion, with flakey lymph floating in it,

and here and there effusions or extravasations of fluid blood between the osseous and fibrous structures. The substance of the brain and cord was whiter than usual, and to the eye did not seem to have what is generally regarded as a diseased appearance, viz., red or congested; although the blood-vessels were well shown at the base, and the sinuses of the dura mater were full of venous blood.

The brain and portion of cord having been handed over to Professor Axe, probably we may some day be favoured with a more minute pathological description of them.

Case II.—A cross-bred cow, in good condition, twenty-one days after her fourth calving, was found to be weak across the loins, so that she had difficulty in getting up. A drench was administered, some liniment rubbed into her back; when she got up in a few hours, and seemed as if nothing had ever been wrong. Next day I chanced to call on some other case, when the owner told me about her, and while we stood talking on the subject, and looking at the cow as she stood in the yard chewing her cud, she began to lift up one hind-leg and shake it, as if something was amiss. When made to move she staggered after one side, going always from the affected side, and soon became unable to steady herself for some time together. This condition seemed to wear off, when she would appear as if nothing had ever been amiss with her. I administered a strong purge, rubbed some ammonical liniment into the lumber region, which excited her a good deal, and when she settled down from its effects she was to all appearance right, and continued to feed and give her usual quantity of milk. Next day she was slightly off her food, and her milk diminished; she was dull, her head drooping, fæces and urine normal; pulse 82 and full, temperature 100° Fahr.; staggered slightly when made to move, no quivering of voluntary muscles, or anything to indicate any particular lesion or condition of the nervous system.

On the third day she was much the same, but the unsteadiness in her gait more apparent; the secretion of milk diminishing, appetite failing; pulse and temperature the same; bowels becoming costive, urine normal. The owner thinking it a rather doubtful case, refused to allow any more attempts at curing her by administering any medicines, in case the carcase should thus

be rendered unsaleable. So that the *vis medicatrix naturæ* had its fair share of the curative process.

I pleaded for a few days more, which was granted; but the *vis* being too slow or too feeble, was not allowed its full scope either; for on the sixth day the axe of the butcher made it relinquish its hold.

On the fourth day she was slightly better, ate rather more, but was very dull; the secretions were more natural.

The fifth day found her duller; there was quivering of the muscles of the fore extremities, chewing imaginary objects, saliva dribbling from the mouth, pressing her head into a corner or against a wall, staggering when made to move, secretion of milk almost suspended. I saw her on the morning of the sixth day, when she seemed slightly better; she was inclined to eat a little, but scarcely able to walk or stand without staggering; the quivering of the muscles was very evident, with champing of the jaws and grating of the teeth at intervals; temperature 100° Fahr.; bowels acting fairly, also the kidneys. She rarely lay down, and soon got up again; and as the owner's patience was exhausted, the butcher was called in.

I made as minute an examination as circumstances would permit; and forwarded by post the spinal cord to Professor Axe, who will no doubt enlighten us one of these days on its peculiar pathological condition. The brain, unfortunately, was rendered useless for pathological purposes, owing to the mode of killing her; but the membranes of the cord were in such a condition of effusion and extravasation as left no doubt upon my mind as to what that condition is, whatever may be the cause or causes inducing it. I may mention that the butcher noted that an unusually large quantity of blood flowed from the jugulars when severed, which made me question the propriety of omitting the therapeutical agency of venesection.

The carcase dressed well; all the organs were healthy, and no one could have detected anything amiss.

The uterus was perfectly healthy; it contained no fluid; indeed, one could scarcely have said that it had ever contained a fœtus.

I note this circumstance, because some practitioners believe

that absorption of the discharges that should come away *per vaginam* are the primary cause of this peculiar condition. This case rather negatives this conclusion; and, further, in cases where we have the discharge most plentiful and most purulent, viz., *Metritis*, we do not find such symptoms.

Remarks.—Whatever may be the cause of this condition of system, one thing is clear—to my mind at least—that it is of an inflammatory nature, and that, too, of the membranes of the brain and spinal cord. For in these cases recorded—which did not differ materially from any others I have observed—were the usually admitted products of inflammatory action, viz., the effusion of serum and extravasation of blood. The sudden and unexpected death in Case I. points unmistakably to the rapid cerebro-spinal effusion as the immediate cause, and I have little doubt but that had Case II. been allowed a little longer time a similar termination might have been the result.

It is distinguished from Parturient Apoplexy in the time of its occurrence, and the absence of coma manifested in most cases of that disease; as also in the animal being able to maintain the standing position to the last. The bowels, slightly deranged generally, are not so much so as in Apoplexy, where we have the obstinate constipation; indeed, in some cases there is a fœtid Diarrhœa. Nor is the urine retained as in Apoplexy, and the lacteal secretion is not so much interfered with. The ganglionic system is not involved, as it unquestionably is in Parturient Apoplexy. The peculiar condition of eclampsia—characterised by sudden loss of sensation and voluntary power—we find in Apoplexy, is absent in this disease.

The condition is chronic, of an inflammatory nature, affecting the meninges of the brain and spinal cord, inducing effusion and extravasation of blood and serum, and either terminates suddenly, with symptoms of Apoplexy, in from three to six days, or gradual recovery takes place. In Apoplexy the parturient state is the exciting cause, but not necessarily so in this, at least in a very remote degree; but it seems in some way connected with the condition of lactation.

Cerebro-spinal Meningitis in bipeds is generally attributed to blood-poison from some specific or constitutional disease, such

as the specific fevers, or the numerous cachexias common to the species—conditions which do not occur in quadrupeds, and can scarcely be said to be present in the subjects under consideration, unless it be in cases in which the disease occurs before the lochial discharges have been expelled. If the retained fluids that in ordinary involution of the uterus should be expelled, were the primary cause of the inflammatory condition of the spinal cord, we should undoubtedly find it more frequent; for, unfortunately, *Metritis* and *Metro-peritonitis* are not of unfrequent occurrence. In Case II. the involution of the uterus was complete; and, indeed, at twenty-one days after parturition it may always be considered so.

In Case I. the sudden death, the congested state of the body generally, the enlarged and vascular condition of the kidneys, favour the supposition of uræmic poisoning, but the cerebro-spinal effusion was rather opposed to this idea.

Although no description of such a disease is to be found in any of our works on Cattle Pathology, still I am convinced it is by no means uncommon in the class of animals referred to, in districts where dairy-farming prevails.

Williams, in his "Principles and Practice of Veterinary Medicine," refers to this affection as observed in America in 1871 among horses, where it assumed an epizoötic form; but, unfortunately, he gives us no *post-mortem* appearances, and only hypothetical conjectures as to its nature; although, undoubtedly, it must be regarded as the action of some specific blood-poison having some affinity for the nervous tissues of the body.

Horses not unfrequently do fall victims to nervous affections, the result of blood-poisoning, frequently after influenza, and even as an idiopathic disease—Azoturia, for instance; and I witnessed one case in a mare last summer, as the result of excessive lactation.

Law, in his "Veterinary Adviser," alludes to it as affecting horses in America, and states that it has not been recognised in Europe. Armitage, in his work on "Cattle Disease," alludes to a "*nervous debility* in cows at, or immediately after, calving," which seems in some measure to coincide with the one under consideration. This he attributes to "functional disorder alone,

and a want of proper tone in the capillary circulation, inducing debility of the nervous system;" in fact, something like congestion of the spinal cord or its meninges.

It is evident, however, that it is not exactly the same affection, although it serves to shine a kind of side-light upon it; for Cerebro-spinal Meningitis in the cow is undoubtedly associated with exhaustion of the spinal cord and brain, induced by the demand made upon it by the evolution and expulsion of the fœtus and the production of the *caseinous* fluid called milk.

The more frequent occurrence of this disease than formerly, and that, too, in milk-producing districts, strengthens this suggestion; and the fact, also, that it occurs principally in heavy milkers, in the prime of life, and generally in poor condition, supports this hypothesis; while all the symptoms, appearances, and circumstances considered, negative the septicæmic theory.

The production of a complex fluid-like milk is associated with an increased development of the ganglionic nerve-fibres; these having such an important relation to the capillary circulation as to have it under their special control. Without transgressing the rightful limits of pathological speculation and physiological fact, one may venture to attribute this condition to the *over-development* of the sympathetic system, and the controlling effects it manifests on the capillary circulation.

Now when we reflect upon the functions of the brain and spinal cord, and the amount of blood supplied to them for the exercise of these functions, in accordance with the well-known physiological axiom, viz., "that organs which display great functional activity require and receive an abundant supply of blood, so that the work performed by the organ bears a relation to the amount of blood which flows through it in a given time," need we wonder that any irregularity in the quantity or quality should be followed by marked results?

The important chemical elements abstracted from the system by the fluid undoubtedly leaves it a prey to diseases of a degenerative type, having their origin in the anæmic condition thereby induced.

And I question if we are sufficiently alive to this grand physiological fact, in considering the etiology of the diseases of the

lower animals, that whenever a tissue is deprived of nourishment either in quality or quantity, it has a tendency to undergo the retrograde metamorphosis known as fatty degeneration; indeed, it occurs as a physiological fact in their natural or premature decay.

Whether it may be regarded as a factor in the etiology of this disease, is perhaps doubtful; but it has an important relation to the etiology of many of the diseases of the lower animals.

The symptoms and *post-mortem* appearances of this disorder bear a very close analogy to the disease known as "*Louping-ill*" in sheep, the cause of which is, unfortunately, not yet definitely determined. And I observe from the May VETERINARY JOURNAL, that Mr. Webster, M.R.C.V.S., Hawick, had a well-marked case of cerebro-spinal disease in a cow, which, if he could assure us was induced by a similar cause to that principally accredited for its production in sheep, viz., *ergot*, it would very materially alter our views of its nature and etiology.

The cause or causes of the determination of blood to the meninges of the brain and spinal cord, are the important problems to solve in the etiology of both diseases.

In the one, "Louping-ill," there is evidently some blood-poison, or chemical element having a specific affinity for the nerve-tissue, or specific action upon the vasa-motor centre regulating the supply of blood thereto. In the other it is either the inability of the nerve-tissue, through some peculiar molecular changes, to appropriate the pabulum supplied to it—"*exhaustion*" (?)—or an inability of the meningeal vessels to properly send on their contents, through some interference with their functions in the manner already indicated.

In the present state of our knowledge of the physiology and pathology of these tissues, it may be premature to hazard a more definite opinion.

FLUKE IN THE LUNGS OF CATTLE.

BY MATTHEW HEDLEY, M.R.C.V.S., TRAVELLING INSPECTOR TO THE VETERINARY DEPARTMENT, IRELAND.

CASE I.

ON April 8th, 1881, as I was casually looking at some lungs hanging in a butcher's slaughter-house, I observed a portion of the organ situated near the inferior border of the large lobe of the right lung to be slightly distended. The distended portion was rather hard to the touch as compared with other portions of the lung, but slight pressure broke down the substance, and a sensation like rubbing pieces of grit or of broken egg-shells together was at once felt. Upon cutting into the portion, a brownish-yellow viscid fluid escaped, which looked so much like bile that had flowed through bile-ducts having flukes in them, that I made a careful search to see if any were present. My search was rewarded by finding a *single* fluke. The fluke and fluid seemed to have been encapsuled in a substance made up of this gritty matter mentioned. It was similar both in colour and brittleness to crusta petrosa, *i.e.*, when a thin layer of the latter is taken between the fingers. This capsule was adherent to the lung-tissue, and seemed to be full of loculi. The fluke is similar to the Distoma hepatica, and is sexually mature. I see there are ova in the uterus. I had no opportunity of examining the liver of the heifer from which the lungs were taken.

CASE II.

On April 17th, when examining the lungs of a cow at another slaughter-house, I observed a distension similar to the one described. These lungs had been removed from a cow about twenty-four hours. Upon cutting into the tumour, I found the same kind of capsule and fluke as in the last-named case. A careful search again rewarded me with a *single* fluke, which, upon this occasion, was alive. I placed it upon my finger, and it crept for about an inch and a half. Its mode of progression was interesting, and performed as follows :—The portion anterior to the ventral sucker was protruded, becoming longer and narrower, the other portion of the parasite remaining stationary; then the oval sucker was placed, with a little jerk, towards my finger and made a fixed

point, then the middle third of the parasite was drawn forward, and the ventral sucker became a fixed point, behind which the remainder of the parasite was contracted, thus bringing it forward and giving the periphery a crimped appearance. Every time the sucker was placed down upon my finger I experienced a small prickling sensation, which extended the length of my (index) finger, and passed away without leaving any after result. I have allowed a fluke obtained from the liver to creep over my hand, but I did not experience any such sensation as I have here mentioned. I had an opportunity of examining the liver of the cow from which the lungs had been taken. I found the bile-ducts were literally packed with flukes, most of which were alive.

I think I am correct in concluding that the specimens are *Distoma hepatica.* I have sent one of them. How it has got into the lung, and any other remarks you or my professional brethren may have to make upon the subject, will doubtless be of some value. I am not aware of any specimens having been found in this organ before. It is possible that if an examination was made of the lungs of cattle and sheep whose liver has become the *habitat* of these parasites, we would find that the lung is an occasional lodgement for a stray fluke.

[The entozoön sent is a good specimen of the *Distoma hepaticum.*]

PUS IN THE GUTTURAL POUCHES.

BY J. C. BERNE, M.R.C.V.S., ARMY VETERINARY DEPARTMENT, IRELAND.

ON the 13th January last, a bay gelding, eight years old, belong- to the battery of Horse Artillery stationed at Newbridge, Co. Kildare, was admitted to the horse infirmary for Strangles. On the 22nd idem he was discharged cured.

February 1st.—At midday stables he was noticed to have a large swelling on the off parotidean region, which was hard and painful. Ordered to be removed to infirmary ; the swelling to be fomented, and a bucket of water having Pot. Nit. ʒj dissolved in it to be placed within his reach.

February 2nd.—No change in the character of the swelling.

There was a difficulty in lowering his head and in swallowing. Continue same treatment.

February 3rd.—No improvement. Apply to swelling Ung. Hyd. Biniod.

February 5th.—Inappetence.

February 7th.—A bulging on the near parotidean region ; and though since admission there was no nasal discharge, I suspected the presence of pus in the guttural pouches. On this date the swelling on the off side had very much increased. The patient kept his head in a horizontal position—nose poked out, and he quite forsook food. This arose chiefly from the mechanical difficulties in the way of prehension and deglutition, occasioned, as I suspected, by the accumulation of pus in the pouches. With the view of confirming my opinion, I inserted an exploring needle through the gland on the off side, into the pouch. In the groove of the needle the pus sluggishly streamed out.

In consequence of the inclement weather, I had to defer operating for the examination of the pouches till the following day, the 8th, when I had patient cast with the greatest possible care.

The skin on the side to be operated on, the off, which was, of course, much thickened, was cut through about an inch and a half from above, downwards along, as close as I could guess, the posterior border of the gland, and I was fortunate on coming on the spot I desired.

I divided the sub-parotidean muscles with my fingers, for the most part, and I gently forced a bistoury cachè through the remaining muscular tissue, into the pouch. Through the small orifice made by the bistoury the pus forced itself, and when the opening was enlarged it came copiously away, quite, I should say, a pint and a half of laudable pus.

On pressing with my hand the region of the parotid gland on the near side, which was underneath, there was a further discharge. Both pouches having been washed out with tepid water, followed by injections of carbolic oil, the patient was allowed to rise.

Orders were given to inject the carbolic oil twice a day into the wound, and a pledget of tow to be kept in the orifice. On patient's removal to his stall he began to eat.

February 9th.—Doing well. The washing out of the pouches

brought away a small quantity of pus having a sanguineous tinge. Previous local treatment to be continued, and give Ferri Sulph. 3ij. morning and evening in food.

February 10th.—Doing well. Continued treatment as before.

February 14th.—There was a *cul-de-sac* extending from the orifice of wound superficially downwards and slightly inwards, about three inches in length, in which some pus had collected. Through this a seton was inserted, and this was dressed daily with phenicated camphor.

February 17th.—Wound into guttural pouch nearly healed. Continued the local dressings and the iron.

At the end of February I was ordered from Newbridge to Cahir. By this time patient was all but well, and on the 7th March I was glad to be informed that the horse was at his duty.

Although it is stated on good authority that a nasal discharge is associated with pus in the guttural pouches, it is well to remember that the symptom is not a constant one; nor is it necessary to operate on the near and off sides to relieve accumulation in both pouches. Proceeding in the way I have described will, I apprehend, be sufficient.

When the quantity of pus is suspected to be large, great care should be taken in casting the animal. There should be a good heap of straw, on which he should be carefully thrown, in order to prevent any chance of the pus finding its way into the trachea, and thus, perhaps, leading to fatal consequences.

CEREBRO-SPINAL MENINGITIS (ENZOÖTIC ?).*

BY A. B. DANIEL, M.R.C.V.S., LONDON.

(*Continued from p.* 329.)

LAST month I related the symptoms present in five fatal cases of the above disease, and since then several cases have occurred, one having proved fatal. The following symptoms were present :—

* We would remind our readers that it is contrary to the rule to publish, as *Original Communications*, articles intended to appear contemporaneously in other professional journals.

STABLE B.

Case III. *b.*—On May 1st an aged bay mare, which worked the day previous, had fed and drank well this morning, was being led out to be dressed about twelve noon, but was observed to stagger and look strange. I saw her at 1 p.m., pulse and temperature natural, mucous membranes slightly injected. The muscles of the neck appeared rigid and cramped, the sterno-maxillaris appearing very prominent near its insertion at the angle of jaw. This symptom is present to some extent in all the cases, but is well marked in the more severe. Pinching the muscles of the neck induced spasms of the head and neck, a sudden and severe paroxysm of clonic spasms seized the whole body, the legs became rigid, the head was thrown violently backwards, and had not the patient been in slings, I should in all probability have been injured. I had the mare put in slings, as I found the hind-legs when in progression crossed each other in a powerless manner, but towards night she had to be removed, being quite unable to stand.

2nd.—Lay helpless, the legs rigidly extended, pulse 48, temperature 99°, bladder full and the meatus strongly contracted (a symptom I have observed present in every case), and in passing the catheter it had to be done slowly by gently dilating the canal; urine apparently normal; breathing slightly stertorous; muscles of the body cramped and rigid, those of the neck in particular; slight trismus; mucous membranes more injected; eye unusually bright; conjunctiva brick-red; pupil contracted. Has not staled, bladder full; passed catheter, urine ropy and loaded with mucus, ammonical odour, colour normal, temperature 101°.

1 p.m. Lies quiet. Breathing 36, spasmodic and slightly stertorous; skin moist. The limbs lie rigidly extended, and the whole muscular system seems cramped, although there is general hyperæsthesia, temperature 102°; passed catheter, urine as before, eats and drinks.

4th.—9 a.m. Learned that the mare changed about 6 a.m. Found the case now hopeless. Breathing stertorous, 72 per minute, pulse 84 intermittent, temperature 103°. Hyperæsthesia

in fore part of the body, sensation gone behind, cervical muscles terribly cramped, limbs quivering and rigid.

4 p.m. Breathing 76, pulse 84, rapid and changeable in volume, mucous membranes intensely injected, temperature 106°. Died shortly after.

The *post-mortem* appearances were very similar in all cases, varying only in degree. The carcases of Cases I., II., and III. *b*, and Case I. *c*, were taken to the Royal Veterinary College, and a careful examination was made by Professors Robertson, Axe, and Pritchard. In the two latter cases the coverings of the brain and spinal cord were mostly intensely congested, and numerous blood-clots were present, with considerable effusion of serum. In the last case reported (Case III. *b*) there was 12 ʒ of effusion collected, a clot of blood existed near the medulla, and the vessels of the meninges of both brain and cord were intensely congested. In none of the cases had effusion taken place into the ventricles of the brain, neither did the substance of the brain or cord show symptoms of congestion. In Cases II. *b* and I. *c* the mucous membrane of the large bowel was congested, as was also the villous portion of the stomach, the latter slightly.

Remarks.—The symptoms and *post-mortem* appearances show conclusively that the disease is Cerebro-spinal Meningitis, and the history of the outbreak points to the action of some poison which acts specifically on the cerebro-spinal axis, and either from the quantity absorbed into the system or from the importance of the portion of the axis which becomes affected, so are the symptoms more or less aggravated.

In investigating the cause of the outbreak, I directed my attention more particularly to :—

1st. The stables.

2nd. The food.

The reason I first directed my attention to the stables was from the fact of numerous cases occurring in two or three studs of ten horses each in a stable, which were removed from the bulk of the other horses stabled at the depôt, in which there were about 230. I had the stables scrubbed down with carbolic acid and lime-washed, and the drains thoroughly cleansed and disinfected. When the disease spread to Stables B and C, I

satisfied myself that neither the location nor sanitary surroundings had anything to do with the disease. All of them are well ventilated; Stable A lies low, Stables B and C lie high, the latter being newly built.

The food consists of maize, oats, beans, and peas, with hay and a small portion of straw-chaff. The whole of these have been changed several times, the maize from different cargoes, besides which, the oats, beans, and peas have been procured from different sources. The same holds good with regard to the chaff: owing to some defect in the machinery at the granary, for some eighteen days none of the stored hay was used, and yet during that time numerous cases occurred. The water supplied is pure. Owing to the congested appearance of portions of the mucous membranes of the bowels in Cases II. *b* and I. *c*, I had the contents of the intestinal canal and portions of the viscera of both thoroughly analysed for both mineral and vegetable poisons, but with negative results. Last month I mentioned that Professor Axe had investigated a somewhat similar outbreak in Essex. I had an opportunity of comparing drawings he had made of the spinal cord in both outbreaks, and certainly the lesions had a similar characteristic, but in his cases some dogs which had partaken of portions of the carcase became paralysed, and the morning after some of the colts had been bled, several sparrows were found nearly unable to fly, apparently paralysed in their wings. I have given portions of a carcase whilst fresh to dogs and cats, sprinkled the blood on some green food and given it to goats, and inoculated both horses and rabbits with the blood, with negative results.

It will be observed that I have marked each case as it occurred in Stables A, B, and C, and I have done so for the purpose of suggesting that to some extent the disease has been infectious. The first appearance of the disease was in Stable A, and I removed four convalescent cases to Stable B on the 18th of March. Up to this time no appearance of the disease had been observed, but five days afterwards Case I. *b* occurred, and since then it has been mainly confined to this stable. I may mention that the latter is built in housings for twenty horses, ten on each side, each compartment separated from the next by a brick wall,

and that the majority of the cases have occurred in Nos. 2 and 3 of these compartments. I may also mention in connection with Case I., Stable C, that the mare stood all night in Stable B, compartment No. 1, and during the day at Stable C, and that the outset of the disease was first observed on her way between Stables B and C ; since then several cases have occurred in Stable C. These facts show that reasonable grounds exist for suspecting the disease to be to some extent infectious.

It is a noticeable fact, that out of thirty-five cases, all, with three exceptions, have been mares. One of the gelding, Case II. *a*, died ; another, attacked on the 1st of April, was raised in the slings on the 4th, and stood in them until Friday, 13th May, when I had him removed. He appeared rather stiff, but not more than would be expected from the length of time he had passed without exercise. The same night he got down and had to be assisted up, after having struggled for some time. I was called to see him next morning, and found him breathing very heavily, a rusty discharge from the nostrils, the breath fœtid, and to all appearance moribund from a rupture of an abscess in the lungs. He had become quite fat in the slings, eating and drinking heartily. In fact, most of the non-fatal cases ate well, and although under the influence of the disease, became fat during convalescence.

It is also worthy of notice that no fever exists in the primary stages of the disease, and that in four out of the six fatal cases recorded the duration of the disease was four days. In Case I. *b*, which succumbed to Tetanus twelve days after the attack from Cerebro-spinal Meningitis, the crisis of the latter disease was reached on the fourth day, and the same may be said of several of the non-fatal cases.

The treatment adopted has been various: warm and cold applications to the spine, ice, ergot, belladonna, venesection, oleaginous, aloetic, and saline purgatives, etc.; but I have found most benefit from diffusible stimulants, with the application of Liq. Ammon. Co. over the spine, followed on the fifth to the seventh day by Iodide of Potass. and Nux Vomica. Depletives I have found generally followed by hurtful results.

In conclusion, I am hopeful that some light may be thrown by brother-practitioners on this (to me) obscure and fatal outbreak.

Editorial.

THE EDUCATION OF THE VETERINARY SURGEON.

THE question of the hour for those who have the welfare of the veterinary profession in their hands and at their hearts, is undoubtedly that of education, general and special. The movement in this direction which has been recently and so auspiciously begun, must not be allowed to intermit or subside, as on its energetic continuance depends the future of veterinary medicine and its practitioners in these kingdoms. It is, we hope, quite unnecessary at this period in our history to adduce arguments in favour of candidates for admission to the profession being possessed of a good education, such as will not only enable them to hold their own in society and among members of other scientific bodies, but will also render them capable of understanding and profiting by the technical instruction they should receive as students; so that they may pursue their calling, after graduation, with honour to themselves, advantage to the public, and gain to science. Too much stress cannot be laid upon the necessity that exists for exacting from those who are to become veterinary surgeons clear proof that they have received a certain amount of general education and mental training, without which they cannot succeed in that higher and more exacting education which is to fit them for their professional career. We strongly endorse the saying attributed to Menander, that "merely to have learnt how to learn is a great advance." We have been repeatedly told by teachers (not veterinary) in our schools, that their labours in instruction were unsatisfactory and disheartening, for the reason that many of the students had never been taught how to learn, and were utterly ignorant of the language of science. And there can scarcely be a doubt that much of that social ostracism of which we hear so much complaint from members of the profession, is not due to the fact that a man is a veterinary surgeon, but rather to the notion prevailing somewhat widely among the public that we are, even if useful practitioners, uneducated and illiterate in the extreme.

Professional education must be largely based on the general education the student has received. If he is unable to understand the language of science, or to comprehend the subjects he must study, and has to begin his ordinary education when he should be commencing his technical tuition, then it is evident his progress must be slow and doubtful, and the task of his teachers painful and fruitless. Education now-a-days is brought within reach of the poorest individual, so that poverty can scarcely be a valid plea for ignorance; rather is it a mark of stupidity or inherent mental deficiency, neither of which should be allowed admission to the profession, indicating, as they do, incapacity for the proper discharge of the functions of a veterinary surgeon. Therefore it is absolutely necessary that insufficient general education—in other words, deficient mental training, should be a barrier to graduation in veterinary medicine.

And so it is with professional education. It is acknowledged on every side that the veterinary schools cannot teach all that a graduate

should know, and that they signally fail in imparting what is called "practical instruction." The previous training, and the examination for the diploma, should give the public a fair amount of security that the graduate whose name is on the register of the Royal College of Veterinary Surgeons as a qualified practitioner, is equal to the performance of any duties which he could be reasonably expected to undertake. It is, under present circumstances, quite impossible to test the students thoroughly in the final or practical examination. Those who assert the contrary have evidently no conception of what is necessary to do this. Therefore the student should furnish adequate proof that he has had the advantage of practical training, if only for a limited period, and particularly in those matters which are of every-day importance to him in his career, before he becomes a member of the profession. Surely nothing can be more reasonable than this, nothing more fair to the public or necessary to the reputation of the Royal College, not to mention the welfare of the graduate himself!

Every year veterinary science is becoming of more importance to the community, and the demands upon it are increased. The Royal College must endeavour to meet these demands by giving an assurance that those whom it licenses are fully competent to play their part in carrying out the objects of their science for the general good. Nothing less than this would sanction its existence as a licensing corporation, and it would certainly be a dereliction of duty and a dishonour, as well as a grievous wrong to that science, if it does not act up to the maximum of its responsibilities.

At present we must admit our woful shortcomings as a professional and a scientific body. Hitherto, our energies appear to have been chiefly devoted to developing that stunted unimprovable individual known as a "practical man," instead of the scientific practitioner. People who know not the rudiments of science, nor what should constitute the training of a skilled veterinarian, and who class as theoretical, and therefore to be scouted, because they do not understand studies which are eminently practical in their aims and tendencies, and without which no man can successfully practise, will insist upon the production of the "practical man." Consequently, our position in the world of culture and science may be easily inferred. In scientific research we are simply nowhere, and the profession has not produced one original investigator of any note in pathology or other branch of science since the foundation of the first veterinary school in this country. When a disease among animals has to be investigated, a pathological problem solved, or a sanitary matter of great moment reported upon, to whom is the duty confided? Certainly not to the so-called "practical" men in the profession, but to well-educated, well-trained medical men who may know but little of the subject, but who are supposed to be trustworthy because they are well educated and trained; whereas the practical man is popularly suspected to be neither.

Surely this is not a state of affairs to congratulate ourselves upon, or to contemplate with folded arms. We repeat, our existence as a profession depends upon education, general and technical; and the Royal

College will be unfaithful to the great trust committed to it, and an enemy to veterinary science, if it does not, by every means in its power, promote this education to the fullest extent.

We are quite aware that there are those in our ranks who, from selfish or other reasons, appear to have a dread of education, and some who even go so far as to assert that the less educated a veterinary surgeon is, the more commendable practitioner he makes. The best and the worst that can be said of such persons is that they are themselves "practical men." But it is with these that the Royal College will have to contend in its efforts to raise the educational standard of the profession, and with it the profession itself; and it must be prepared to encounter every form of opposition which such men can offer. It may be threatened with all kinds of dire consequences, and the aid of powerful obstructive influences may also be invoked. But at these it can afford to smile. So long as it is determined to discharge its functions for its own benefit (which is that of the entire profession) and that of the public, it need have no fear for open and occult opposition or threats. Mrs. Partington in pattens, with mop and bucket, could no more stop the advance of the tide than can these stay the Royal College in its efforts to improve veterinary education, so long as the profession remains united; and it has never been more united or powerful than it now is, and is likely to be.

OUTBREAK OF DISEASE AMONG ANGORA GOATS IN SOUTH AFRICA.

We learn from South Africa that a serious outbreak of disease has taken place among Angora goats in the Bedford district, South Africa. According to the reports of Mr. Hutcheon, Colonial Veterinary Surgeon, it is a contagious Pleuro-pneumonia, and was introduced into the district by sick animals. Its contagiousness appears to be established by the manner in which it has spread, and also by experimentally placing healthy with diseased goats. The following is the history of the outbreak:—

"Mr. Niekerk purchased an Angora ram at Mr. de Wet's sale at Somerset, on January 26th. This goat arrived at Mr. Niekerk's farm on the 27th, and on the 29th he was observed to be sick; he was carefully attended to, and recovered, but a she-goat which was suffering from some kind of lameness was allowed to remain with him, and in about six days after she was observed to manifest the same symptoms as the ram had done, and in a day or two she died. A *post-mortem* examination of this goat revealed the fact that the disease was a species of lung sickness. The ram after this was allowed to associate with about fifty lame goats which had been kept about the homestead for special attention. On the 26th of February, these goats were distributed among the other flocks, and on the 4th of March the disease made its appearance first among these fifty, and from them it spread over the entire flock, there being scarcely any free at the present time, and out of the original 1,200 of which the flock was composed, 600 are already dead. Since its first appearance, Mr. Niekerk exchanged a ram with Mr. Piet Botha, and from that ram Mr. Botha has now over 200 affected with the disease. The disease is a most virulent form of Pleuro-pneumonia, and from the above facts there cannot be a doubt as to its contagiousness. The medical treat-

ment of such a disease seems utterly hopeless, and every effort should be made to prevent its spread beyond its present limits by the complete isolation of the flocks where it has made its appearance."

VETERINARY SURGEONS' BILL.

THIS Bill has been introduced into the House of Lords, and as we go to press, the public prints announce its second reading for May 31st. It is anticipated that it will not undergo much delay in the House of Commons.

BRITISH NATIONAL VETERINARY CONGRESS.

WE have received a copy of the circular which has been forwarded, we are informed, to each constituent of the Royal College of Veterinary Surgeons, announcing the intention of a Provisional Committee "to assemble the members of the veterinary profession of Great Britain and Ireland at a Congress to be held in London, on 13th and 14th July, 1881." An accompanying letter from the secretaries informs us that it has been definitely decided that in view of the present aspects of professional affairs in this country, it has been thought advisable to arrange that all constituents of the R.C.V.S. shall be eligible as ordinary constituents of the Congress, and the following measures will be adopted with a view to the attendance of other gentlemen "interested in veterinary progress":—

I. An invitation will be forwarded to the secretary of each Veterinary Licensing Body in Great Britain or the Colonies, requesting the pleasure of the attendance of graduates of the body as *visitors*.

II. In view of the important influence on veterinary progress exerted by some of these bodies in the past and at present, a selected number of graduates of each shall be requested to accept recognition from the Congress as *honorary constituents*.

III. That invitations to scientific societies and other bodies interested in veterinary progress, to depute representatives to the Congress, shall be issued by the secretary. Representatives shall be nominated honorary officers of the Congress.

IV. Each constituent shall have the privilege of inviting friends as visitors to the sittings.

The Congress has official representatives in each part of the United Kingdom and the Colonies, and a number of leading members of the profession have expressed their concurrence in its aims and willingness to support the movement. "Major subjects" for debate at the sittings have been arranged as follows:—

1. The questions of soundness and unsoundness in domesticated animals (Irish Section).

2. The influence of diseases of the lower animals on the health of man (Scotch Section).

3. On cruelty to animals, from a veterinary point of view (Lancashire and Yorkshire and North of England Section).

4. On effective legislation against contagious diseases of animals (Central —South of England—Section).

A copy of each paper will be sent to each subscriber a fortnight before the first sitting; and at the sittings the papers will be taken as read, and so time will be economised. The Colonies will be represented by reports from their

respective sections on the progress and present position of veterinary science in the particular colony to which each secretary belongs.

It has been decided that the Congress shall be presided over by the President of the Royal College of Veterinary Surgeons. That he, with other officers, shall be nominated and elected by the Provisional Committee, and the list submitted to the constituents at the first sitting.

It has been decided that should any surplus funds remain in the hands of the treasurer after payment of legitimate expenses of the Congress, the balance shall be handed to the Royal College of Veterinary Surgeons, with a request that it be considered a donation from the Congress to the Building Fund of the College. Since the Congress has been arranged with the especial aim of submitting to a large number of members of the profession questions of interest and urgency, a special portion of the time at the disposal of the Congress will be devoted to minor subjects. As it is anticipated that these will be numerous, it has been thought advisable to limit the treatment of these to a note by show of hands or otherwise. It is requested that any gentleman desiring to introduce a minor subject will forward it, with the arguments *pro* and *con*, in as few words as possible, to one of the secretaries, not later than 9th July.

Measures have been taken with a view to secure a suitable place for the sittings, and the other steps to ensure the satisfactory reception of extra-ordinary and ordinary constituents have been taken by the central section of the Provisional Committee, which consists of twenty-five gentlemen representing the professors and army and private practitioners in and about London.

We trust the profession has now arrived at such a state of unity, thanks to the recent measures of the Royal College of Veterinary Surgeons, as will secure for this Congress movement such brilliant professional and social success as has attended similar meetings on the Continent in various countries.

The time and place of the first sitting will be duly announced.

ARMY VETERINARY SURGEONS AND VETERINARY SURGEONS OF YEOMANRY CAVALRY.

THE following Royal Warrant in reference to the grant of charge pay to officers of the veterinary department, and the employment of veterinary surgeons on the retired list, and also those of yeomanry cavalry, was issued in May.

VICTORIA R.

Whereas it has been represented to Us that it is expedient to make certain further regulations in regard to the Veterinary Service of Our Army.

Our Will and Pleasure is that Charge pay, at the rate of 5s. a-day, may, from the 1st March, 1880, be granted—

(*a*) To a Veterinary Surgeon when in sole charge of mounted troops of Our Regular Forces serving in a command abroad, provided the total number of animals attached to such troops shall exceed one thousand five hundred.

(*b*) To the Senior Veterinary Surgeon with troops in the field, provided the total number of animals attached to such troops shall exceed five thousand.

Our further Will and Pleasure is that Our Secretary of State may, when he shall deem fit, employ Veterinary Surgeons on the Retired List and

Veterinary Surgeons of Yeomanry Cavalry, in special situations, under such conditions as he shall from time to time determine; but such Officers shall in no case retain their appointments after attaining the age of sixty-five years, and on ceasing to hold such appointment, those appointed from the Retired List shall revert to the Retired List with the rate of retired pay of which they were in receipt when appointed to such special situations.

2. A retired Veterinary Surgeon, while holding such an appointment, shall cease to draw his retired pay, and shall receive a consolidated salary at a rate exceeding the amount of such retired pay by £150 a-year, which shall include all allowance, except forage, for a horse when the employment of one is indispensably necessary for the proper performance of the duty.

3. A Veterinary Surgeon of Yeomanry Cavalry, holding such an appointment, shall draw a salary of £150 a-year, in addition to the pay and allowances of his yeomanry rank while his regiment is assembled for exercise or for permanent duty: provided that during such exercise or permanent duty he shall, if necessary, supply a substitute at his own expense for the performance of all duties at the station other than with his yeomanry regiment. Forage for a horse shall be allowed when the employment of one is indispensably necessary for the performance of the duty. The salary specified above shall, however, give no claim to half-pay, pension, or retired allowance.

Given at Our Court at Osborne, this 21st day of April, 1881, in the 44th year of Our Reign. By Her Majesty's Command,

HUGH C. E. CHILDERS.

BEACH'S UNIVERSAL ECRASEUR.

FOR a number of years the ecraseur has been largely employed in human and animal surgery, and is now considered an almost indispensable instrument. But the various modifications adopted from time to time, though they might be considered more or less as improvements, still left much to be desired, and having ourselves often felt the need for a more perfect and convenient instrument, we hail with much satisfaction the ecraseur introduced by Mr. Beach, M.R.C.V.S., as it meets all the requirements which are absent in the other forms. A vast amount of ingenuity and mechanical skill have been expended in the construction of the instrument. It consists of upwards of fifty pieces (not including the chain), more than a dozen of which are manufactured in a lathe, including the main screw, which has a *square* thread, the cutting of which is most expensive, but which is far more durable and steady in movement than the V-shaped thread of other ecraseurs. The action of the instrument is automatic, and very slight pressure on the handle (E in the figure) will convert the fast movement to slow, and slow to medium or direct motion, either being retained in action by merely moving the springbolt. This arrangement meets one great defect in the ordinary ecraseur, and is a most important one in such an operation as castration, especially when performed while the animal is standing. Another important feature may be noticed, and which is not present in other ecraseurs. On turning the handle the chain must either leave or enter the slot *direct;* it is impossible for it to do otherwise, on account of the oval tube in which it runs. The chain is attached to arms on either side of the carrier or nut B; consequently. the pulling strain is on the centre of the screw, and not to one side, as in ordinary screw instruments. The two last links of the chain are serrated to assist in disengaging the portion of tissue which has been crushed off during the operation. These links are attached to a

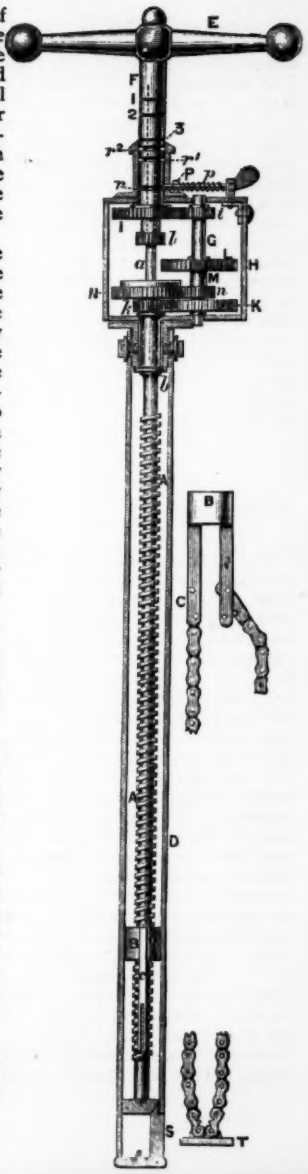
"cutter" placed thereon for the purpose of freeing the instrument from connective tissue adhesion. The attachment of the chain itself is also most ingenious and perfect. The ecraseur is made of steel throughout, and is nickel-plated—another far from trifling advantage so far as cleanliness and preservation are concerned. In order that the novelty and efficiency of the instrument may be fully understood, we give the following description from the specification, which explains the figure.

The invention consists mainly in the combination with the screw, and the handle by which said screw is operated, of change or multiplying gear, whereby either the speed or the power of the instrument may be increased at will, both these change gears being combined in one and the same instrument, or employed in separate instruments. The object is in the one case to impart to the screw a *quicker* motion than that of the handle in order to traverse the nut (to which the chain is attached) quickly along the screw for the purpose of rapidly adjusting the length of the chain to suit the operation to be performed; and in the other case to impart to the screw a motion *slower* than that of the handle in order to multiply the power during the actual performance of the operation.

In ecraseurs the handle has heretofore been fixed directly upon the screw, but according to this invention the handle is fixed on a spindle separate from the screw, and the two are geared together by change gear as follows:—

To impart a motion to the screw quicker than that of the handle a spur wheel on the spindle is made to gear with a pinion on a short counterspindle which is geared by a spur wheel with a pinion on the screw. To impart a motion to the screw slower than that of the handle a pinion on the spindle is made to gear with a spur wheel upon a sleeve that runs loose on the counterspindle, and is geared by a pinion with a spur wheel on the screw. Either the quick or the slow motion may be thrown into gear by *sliding* the handle spindle *longitudinally* and locking it in the one or other position.

The inner end of the spindle may also be made to engage by a *clutch* directly with the screw in order to operate the latter without the intervention of the change gear.



The spindle is made tubular to receive a prolongation of the screw, and also a spiral spring which tends to push the spindle outwards and throw the quick motion into gear.

This change gear is wholly contained within a box or case forming part of the frame of the instrument.

The annexed figure is a longitudinal section of the case or frame of the instrument, showing the double set of change gear which is represented in the position for imparting a quick motion to the screw

A is the screw, and B is the nut travelling thereon, the chain or its equivalent, being attached to arms *c*, *c*, at diametrically opposite sides of the nut, so that the chain is in the same plane with the screw, and there is consequently no tendency to *cant* the nut. Both the screw and chain are contained in a tubular sheath D of oval form in cross section, in which the nut B fits so as to be thereby prevented from turning. The screw is journalled in this sheath D, and is prevented from moving longitudinally by bolts received in a circumferential groove in the upper end of the screw; E is the handle for operating the screw. It is provided with a short spindle F in line with screw A, and made tubular to receive a plain prolongation *a* of the screw spindle of small diameter, which slides and turns freely therein, and a spiral spring which tends to push the spindle F outward; G is a short counter spindle parallel to the screw spindle A, and mounted to rotate in bearings in a box or case H forming part of the frame of the instrument; I is a spur wheel keyed on the spindle F near its inner end, and *i* is a pinion fast on the adjacent end of the spindle G; K is a spur wheel keyed on the opposite end of spindle G, and geared with a pinion *k* fixed on the upper end of the screw spindle A; *l* is a pinion fixed on the inner end of spindle F; and L is a spur wheel keyed on a sleeve M turning loose on spindle G, and having a pinion *n* upon it in gear with a spur wheel N keyed on the screw spindle A. The end of spindle F is capable of engaging by a clutch directly with the spur wheel N. This wheel N is united to pinion *k* by cutting a hole through it with an inside ring of teeth, the exact counterpart of pinion *k*, and soldering the wheel N on the pinion, the latter only entering half-way through the wheel. The pinion *l* is exactly like pinion *k*, so that it also will enter the hole and engage with the teeth therein, thus forming a clutch. P is a latch or bolt sliding in an ear fixed on the cover of box H, and pressed inwards by a spring *p*. The nose of this bolt passes through a hole in the side of the tubular frame of the instrument, and enters either of three circumferential grooves r, r^1, r^2, in the spindle F in order to maintain the parts in gear in either of the three positions in which they may be adjusted, viz., in the figure the spur wheel I is in gear with the pinion *i* for multiplying the motion of spindle F through spindle G, and gears K, *k*, to screw A. This is the position for rapidly running the chain in or out previous to the performance of the operation. To change this motion the spindle F is pushed inwards until I is disengaged from *i*, and the pinion *l* is put in gear with wheel L for imparting slow motion to screw A through sleeve M and gears *n*, N, the gears K, *k*, and spindle G then running idle. This is the position for obtaining the increased power usually required for the performance of the operation.

To obtain uniform action the spindle F is pushed still further inwards until the pinion *l* enters hole for operating screw spindle A directly from the handle E, as may be sometimes required, without the intervention of the change gears which, in this position all run idle. 1, 2, 3, are marks on the spindle F to show at a glance which motion is in gear.

By means of the above described arrangement, the operator is enabled to rotate the screw spindle A either slower or quicker than the handle E at will, and is thus enabled to use a screw of comparatively coarse pitch and *strong* thread.

The screw spindle A is left plain for a short distance at each end of the course of nut B, to prevent the latter *jamming* fast against the bearings of the screw spindle when it reaches either end of its course, and in order to lead the nut back on to the screw again a spiral spring or india-rubber cushion is placed either on the nut B or on the bearing against which it presses, as at *b*, for example.

On one side is an elevation of the nut B at right angles to the main figure A. The chain C is attached to two arms *c*, *c*, fixed to nut B, but instead of a chain a wire or other equivalent may be used. The head S is fitted in the end of the tubular sheath D, and has a slot *s* through which the chain C passes.

T is a cutter formed of a bar of steel of rectangular section, and corresponding exactly to the section of the slot *s*. It is attached to the chain as shown, and is by it drawn into the slot *s* to ensure the *clean severance* of any tissues adhering to *the part operated on.*

PRESENTATION TO PROFESSOR VAUGHAN.

AT a meeting of the students of the New Veterinary College, Edinburgh, held in the lecture theatre, on March 17th ult., Professor Vaughan, who was present by invitation, was presented, on the occasion of his resigning the Chair of Anatomy, with two very handsome richly-carved silver goblets and a massive Highland dirk, as a token of the esteem in which he is held by the students, and of the kindly feeling which has always existed between them.

Proceedings of Veterinary Medical Societies, &c.

ROYAL COLLEGE OF VETERINARY SURGEONS.

ANNUAL GENERAL MEETING, MAY 2ND, 1881.

THE thirty-eighth annual general meeting of the Royal College of Veterinary Surgeons took place at Red Lion Square, on Monday, May 2nd, 1881.

GEORGE FLEMING, Esq., President, occupied the chair, and about eighty Fellows and members were present.

The following gentlemen entered their names on the list of the College, viz. :—W. Leather, Liverpool ; W. F. Smith, E. E. Bennett, F. H. Ridler, T. J. W. Dollar, A. Broad, E. E. Batt, W. Hunting, G. Fleming, W. Rogers, E. L. Shave, J. Ward, B. Cartledge, W. Robertson, G. A. Banham, M. J. Harpley, J. M. Gillingham, G. R. Griffith, F. G. Samson, J. Fraser, E. H. Kelly, A. J. Hickman, N. Almond, J. Mackinder, E. C. Dray, T. Greaves, H. K. Shaw, J. Cooper, A.V.D. ; J. T. King, D. McGill, W. B. Walters, A.V.D. ; J. Rowe, M. H. Naylor, H. L. Simpson, C. Sheather, J. H. Brown, J. Gerrard, T. P. Gudgin, A. F. Hinge, H. T. Batt, T. G. Batt, W. H. Coates, A. Lawson, W. A. Taylor, W. G. Boswell, M. Clarke, T. Moore, J. Moore, J. Collins, P.V.S. ; W. S. Wallis, A. R. Charlie, Sir F. W. Fitzwygram, H. J. Hancock, J. R. Cox, T. Briggs, A. Broad, C. C. Sanderson, W. H. Beach, T. H. Lewis, A. J. Sewell, H. D. Gibbings, H. J. Cartwright, J. Atkinson, W. Pritchard, W. Mole, R. Ward, J. Davis, A. Owles, T. H. Simcocks, F. W. Wragg, W. Helmore, J. W. Carlisle, C. Stephenson.

After the ordinary business, it was agreed that as each member had before

him a copy of the annual report, it be taken as read. This report having been distributed to every member of the profession with the voting papers, need not be reproduced here.

The SECRETARY then read the Scrutineers' report of the election. The first six on the list were declared to be elected members :—

Mr. Reynolds	535	Mr. Wragg	353
„ Dray	514	„ Stephenson	327
„ Taylor	498	„ Duguid	311
„ Blakeway	469	„ Cartledge	289
„ Harpley	384	„ Cartwright	242
„ Walley	357	„ Williams	101

The meeting was addressed by the President, General Fitzwygram, James Collins, P.V.S.A.; Messrs. Owles, R. Ward, Cox, Greaves, Helmore, Banham, Simcocks, Dollar, Hunting, W. A. Taylor, Naylor, Rowe, Dyer, Rogers, Stephenson, Moore, McGill, Gerrard, J. Ward, Wallis, and Atkinson.

A lively interest was evinced by the members on the pupilage bye-law.

Mr. WILLIAM HUNTING said he disagreed with the pupilage on principle, as the collegiate course would tend to develop, in due time, a knowledge of practical details; the pupilage appeared to him to be an *escape* from *responsibility* on the part of those who conducted the practical examinations; pupilage also tended to bring about habits of indifference to principles of practice and theory on the part of the students, therefore he should prefer that the student acquired his practice after he left College. He therefore begged to move, as an amendment, "That this meeting is of opinion that a compulsory pupilage of twelve months is no guarantee of a candidate possessing useful practical knowledge, and that it suggests to the Council the advisability of substituting for it a practical test by examination."

Mr. C. STEPHENSON, of Newcastle-on-Tyne, who appeared to speak in a very excited and incoherent manner, and had to be called to order for offensive language, seconded Mr. Hunting's amendment, and left it to be inferred that he disapproved of everything the Council had done during the year.

Mr. ROGERS created much merriment by energetically protesting that education and examinations were quite unnecessary for veterinary surgeons, and the less educated were the best practitioners.

Mr. GERRARD said he thought the pupilage was a mistake, and would be the means of keeping many an industrious young man of slender means out of the profession, from the additional expense and waste of time; he spoke as regards Scotland. He should, therefore, support Mr. Hunting's resolution.

Mr. MOORE, senr., said a year's pupilage was, to his mind, ridiculous, and no good at all; unless three years at least were passed with a practitioner, it was waste of time.

Mr. ATKINSON said he agreed with Mr. Hunting, and would support the motion.

Mr. MCGILL said he was of opinion that the pupilage was an error, and that, besides, twelve months was too short a period if it were to be of any good.

Mr. SIMCOCKS, of Drogheda, said he thought the pupilage question was a most important one, and the only way for the pupil or student to obtain a knowledge of practical details; if the College had not practice the student could not see any. He would heartily support the Council, and said he felt quite sure the bulk of the profession must feel deeply indebted to the Council for their valuable labours.

Mr. HELMORE supported the Council in all that it had done. If it did nothing more for ten years the profession must still be grateful to it for

bringing forward the Veterinary Surgeons' Bill, which he considered was the greatest advance yet made.

Mr. ROBERT WARD said he had all along taken a deep interest in this matter, as he felt convinced the College could not present students fit and qualified to practise until such time that a College farm was established in connection. The important subject—cattle pathology—could not be taught without patients, and the public expected much from the profession, now that contagious diseases were so prevalent. He could assert from his own experience that pupilage was highly advantageous, not only to the student, but to the owners of the patients, and the *patients too*. He did not acquire his knowledge of practice—cattle especially—at college, and the same conditions existed at present as in 1855, and in 1865 the practice was special.

Mr. COX fully supported the Council in the pupilage bye-law, feeling the importance of practical knowledge being in the student's possession before he received the diploma. He could not apprehend how the pupil was to acquire professional tact and habit unless he has passed *some time* in its midst; but the *time* was open to question, the thin edge of the wedge had been introduced, and he would support the Council in extending the period.

Sir FREDERICK FITZWYGRAM said he was quite of the same mind; he thought practical knowledge was useful and essential. He should like to see the pupils furnished with it, but he quite expected this pupilage would not be pleasing to all.

Mr. OWLES was in favour of pupilage, and he was certain the profession could not do better than leave the subject in the hands of the Council.

Mr. NAYLOR spoke on the preliminary examination, and referred to some papers of 1869; on the whole he supported the work of the Council.

Mr. GREAVES said he had already expressed his views, so that he could only say that he was still more convinced from what had been said that pupilage was desirable, indeed imperative.

Several others spoke, chiefly in favour of the pupilage, when, Mr. Hunting's amendment having been put to the meeting, only seven were in its favour and more than seventy against it.

The PRESIDENT expressed himself as gratified at the striking result of the vote, and explained that the examiners had not the facilities for examining candidates thoroughly in all the practical details of the profession; in this respect they were most disadvantageously placed, when compared with examiners in human medicine and surgery, though these also had to rely largely upon the evidence of certificates. In the matter of diagnosis of disease, performance of operations, and a multitude of other things, the veterinary examiners could not examine practically. The pupilage bye-law was carried by nine-tenths of the members of Council, and was approved of by every one who knew the requirements of the profession or cared for its reputation—in fact, by ninety-nine per cent. of its members. Though Mr. Hunting had such a low estimate of his brother practitioners, he (the President) had every confidence in their doing their duty to the pupils entrusted to them. A year was certainly not a long period, but it was the minimum, and if well spent would effect much good; at any rate it was much better than no pupilage at all. If the time was found to be insufficient, then it could be extended; the present was a commencement. The profession was never more united than at present on this question, as the result of the appeal to the meeting showed.

Mr. DYER next remarked that he desired the President to enumerate the offences that would render a member liable to be removed from the register. He had evidence of nefarious horse-dealing practices by a member flouting M.R.C.V.S.L. after his name. He certainly thought such an offence was sufficient, and should like to see the names of all members who dealt in

horses removed. He proposed the following resolution :—viz., "That the Council be requested to define the offences under which members are liable to expulsion."

Mr. T. A. DOLLAR said this question had already been brought before the Council, but nothing definite had yet been done. Some kind of statement should be made.

Mr. COLLINS said that the matter was a very difficult one ; the Council could not sit in judgment on a member ; let a member be convicted before a judge then the Council could act, but to expel a member would expose the College to legal proceedings and expense.

Sir F. FITZWYGRAM said he quite agreed with Mr. Collins, there must be an established fact of some kind before the Council dare move ; a conviction would be all that was needed.

Mr. HUNTING did not agree with this. He said it appeared that the College was not like a club, unable to expel a member for fear of an action ; thus, a man may go on and laugh at the Council. He did not see why the Council should be afraid of the consequences ; determined action would soon stay those disgracing us. He, however, should not like to see horse-dealing among the list of crimes, for he enjoyed a nice deal honourably done with a profit.

The PRESIDENT said the Council would hold an invidious position if it took upon itself such responsibility ; the proper course had been well laid down by Mr. Collins, and he was sure the Council would not shirk its duty. He had asked a complainant to state a case, but he refused ; thus the Council was powerless, for it could not persecute one of its own members for an alleged offence against one outside the profession who refused to prove his charge. Horse-dealers were an honourable body of men, and the trade was not disreputable. Horse-couping and horse-dealing were not synonymous terms.

Mr. Dyer's resolution was declared lost.

Mr. ROWE drew attention to the necessity for a new building.

The PRESIDENT hoped that active measures would be adopted during the ensuing presidential year ; he had done his utmost during the past year, and regretted his efforts had not been successful.

After a few remarks, the annual report, together with the annual balance sheet, was received and adopted.

In conclusion, a hearty vote of thanks to the President was accorded by acclamation.

The election of a Registrar was then proceeded with, and on the ballot being taken, Mr. Hill was declared to be unanimously elected.

The annual dinner took place in the evening at the Albion Hotel, when about fifty members were present. The following guests were also present : Drs. Thin and Townsend, Captain White (Editor of *Army and Navy Gazette*), and Mr. Michie. The usual toasts were proposed, warmly received, and heartily responded to, and there was no lack of harmony, none of those present retiring until the long list of toasts had been exhausted.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE following paper, entitled "Observations on Health, Disease, and Lameness," was read by J. WOODROFFE HILL, F.R.C.V.S., Wolverhampton, at a recent meeting of this Association :—

When I was honoured with an invitation by your esteemed Secretary to read a paper before this society, I can assure you, combined with the pleasure its acceptance gave me, I felt somewhat diffident in appearing as an essayist before an association which has ever stood pre-eminent in England.

Again, my weekly duties at the college to which I have the honour to be attached leave me, as you may imagine, apart from the work of a private practitioner, but few idle moments to call my own. Nevertheless, the Lancashire hospitality and Lancashire talent have laid strong hold upon me, and I felt constrained to make an effort, confirm my promise, and be a listener, if not an essayist, at this meeting.

In the first place I must ask you to excuse the brevity of my paper, and in the second crave your indulgence for the shortcomings which more or less always arise under such circumstances.

In speaking of Health and Disease, were I to limit my remarks to only practical information, such a subject must of necessity occupy a very wide range. Indeed, it is a difficult matter to know how to compress it in a sufficiently small compass for this evening's discussion. It has been observed, "The study of medicine is prosecuted under two relations—namely, as a *science*, and as an *art*. Medicine considered as a *science* takes cognizance of all that relates to our knowledge of diseases, and especially of the circumstances under which they become developed, of the conditions of their existence, of their nature, and of their causes, in the widest sense of these terms. Considered as an *art* (in so far as medicine has that practical value), its object is to distinguish, to prevent, and to cure diseases. The object and aim of medicine as an art is to alleviate human suffering, and to lengthen out human existence, by warding off or by modifying dissease, 'as the greatest of moral evils,' and by restoring health, and even at times reason itself, 'as the greatest of moral blessings.' In other words, the practical view required to be taken of medicine is, that 'it is the art of understanding the nature of diseases, so as to appreciate their causes, and to prevent their occurrence when possible, to promote their cure, or to relieve them when they occur'" (Biglow). "Many branches of human knowledge are combined in the constitution and elucidation of the science; and the practice of medicine as an art ought to be founded on principles of facts of universal, or at least of extensive applicability" (Aitken).

Such remarks apply both to man and animals; and the former, with his superior knowledge, exercises from time to time the power of that knowledge for the benefit of his own species and those of the lower world over whom God has given him control. But though men have written, and will continue to write, on the manifold diseases to which flesh is heir, yet, with all his talent, however great it may be, it has been truly observed by Chomel "that no man possesses all the pathological knowledge contained in the records of his art." Yes, we must go back and back into the lore of our forefathers, combine the opinions of the great ones gone with those present and with the knowledge we possess ourselves, to form anything like a trustworthy, comprehensive, scientific treatise.

Thus it is then, gentlemen, that veterinary medical associations are of value. We meet together, scientifically, for the interchange of opinions. One describes a disease another may not have seen, another records his experience concerning it, others follow in the wake, and so, as one method of treatment is, in its success, compared with another, we arrive, by such comparisons and discussions, at a result most favourable to our patients and the public at large.

To enter upon the subject of Health, Disease, and Death would be to impose upon myself a task which would involve many long days, aye, weeks and months, if not years, to complete it!

Health, the greatest boon of man and animal kind, what a study, and how disregarded! Disease, who can fathom it fully and satisfactorily? Death, how can we describe it, beyond saying life has ceased?

So far as we are versed in the literature of these three, we know certain

changes are necessary. "Healthy life," says Dr. Chambers, "consists in a continuous and equally balanced repetition of the two necessary parts of the renewal of the body, constructive and destructive assimilation—in other words, 'growing and moulting.' The essential nature of disease is a deficiency of health, a deficiency of either construction or destruction in one or more points. The cure of disease, natural or artificial, consists in a new birth, or renewal of deficient life. The most active metamorphosis of the body possible, the highest possible development of life in every part, is health. The partial cessation, or arrest, is disease. The complete cessation of metamorphosis is death." Thus our efforts should be directed to aid, when necessary, Nature's laws, and not, as it is to be feared is too often done, thwart them. Those who have studied the wonderful mechanism of the animal frame cannot fail to be struck with the marvellous structure and exact proportion of every part, and realize the fact that only an all-wise Providence could have brought in being such a masterpiece of creation.

Unfortunately, some form of disease is ever present in this country. Perfect immunity never has, and probably never will be known, so long as cattle exist. But as we have the means within our reach to lessen mortality, and in many instances to altogether prevent animals contracting certain diseases, it behoves us to keep a careful look-out for predisposing causes, when discovered avoid them as far as possible, and when unavoidable to endeavour to modify them; and, as Mr. Fleming observes, "the knowledge we acquire of the nature of causes gives us a means of establishing a system of preventive or prophylactic treatment which must ever form the most valuable and important department of veterinary science." "Were," says Dr. Parkes, "the laws of health and of physiology better understood, how great would be the effect! Let us hope that matters of such great moment may not always be considered of less importance than the languages of extinct nations, or the unimportant facts of a dead history."

Yes, to perfectly understand the laws of health and of physiology would be to reach a higher step on the ladder of fame, and this should be the steadfast purpose of each one of us; for many diseases are still hidden in mystery; their origin is a problem we cannot solve, and their treatment, therefore, unsatisfactory and difficult. Great as the progress of veterinary science has been, much, very much, remains to be done. Well, we must struggle on, and, baffled as we are from time to time, we shall find new encouragement at each step by the gradual experience we gain, an experience which, in right hands, may always be turned to good account.

Veterinary sanitary science has burst upon us like a sunbeam, and chased many a dark cloud away. As in the sister profession, so in our own, this has now become an advanced study, the vast importance of this connecting link between health and disease cannot be lost sight of.

Mr. Fleming's able pen has given to the world a splendid effort on this subject. The amount of disease due to sanitary neglect has been, and still is, immense: a defective drain, an ill-ventilated cow-house, a damp and exposed sheep-fold, a badly constructed stable, are often the unsuspected roots of many fatal maladies. Prescribed medicines, and advertised cure-all drug-chests, are ransacked to remove the effect, while the cause is allowed to remain undisturbed.

The old proverb, "Prevention is better than cure," still holds good. The evil influence must be avoided, the spell broken, or disease will still ride rampant. Nature, nevertheless, is ever progressive: we may thwart her purposes, but yet her influence is exerted. Changes are ever taking place, time rolls on, and age brings with it decay and its many infirmities. It is for us to render those changes as favourable as possible to the maintenance of health compatible with the circumstances.

There is now, however, I am thankful to say, a growing interest in the welfare of stock. Improved methods of transit have been adopted, whereby their sufferings may be ameliorated and disease prevented. This great part has been due to the labours of the R.S.P.C.A., whose efforts on behalf of all that concerns the interest of the lower creation have been productive of such incalculable benefit. The system of inspection, though still in some districts insufficient, is now more rigid, and thus cattle-owners feel a greater protection, and their confidence is strengthened in the powers that be.

These thoughts, gentlemen, having thrust themselves upon me during an evening of meditation, I ran over in my mind the various maladies to which our patients are liable, and the differential modes of treatment, and then I thought, of what use is a good superstructure with a bad foundation? and so Lameness, a favourite study of my own, and I think an interesting one to us all, invited my attention. No veterinary subject perhaps creates greater attention, or invites more outside criticism, than lameness, particularly that affecting the fore limbs.

Very recently I was summoned to London to examine a horse upon which three opinions had already been taken. The first had pronounced it in the shoulder, the second in the knee, the third in the lateral cartilages of the foot. My own coincides with the last, concerning which, until afterwards, I was kept in the dark. Side bone was undoubtedly forming, and is now well marked. To me the lameness was rendered more obscure than to the preceding examination, inasmuch as, in replacing the shoe after removal by the second professional man, the animal had been pricked. My first treatment was venesection from the coronet on both sides, with hot water immersion for the inflamed cartilages, and opening out the nail penetration, and subsequent poulticing for the prick. This is but one illustration out of many which probably most of us could cite, hence I think the subject is of some importance.

Now it would be impossible in so short a paper to dwell thoroughly and do justice to the various kinds of lameness to which horses are liable. I have therefore selected two of perhaps the commonest occurrence, and with which we are all familiar, viz, Splint and Spavin. My description of each will be brief, as I wish more particularly to dwell on the treatment.

A splint, I need scarcely remark, is an exostisis, or transformation of tissue into bone. The causes usually operating in their production are concussion and hereditary predisposition.

Splints vary in character and position. Usually they are associated with the small metacarpal, or "splint-bone," hence the name; but not unfrequently they are formed on the large metacarpal, or cannon-bone, and entirely apart from the smaller ones.

Splints may be situated outside the leg, inside, high up, low down, forward or backward, be single or multiple. They also occasionally exist on hind limbs, usually on the outside of the large metatarsal.

According to Solleysell, there are five varieties of splint, and these I give in his own words. "The first is the simple splint, which but adheres to the bone of the leg, and doth not at all touch the back sinew, and as is also a pretty distance from the knee. The second is a pegged or double splint (le sur-os double ou chevillé) which is when there are two splints, one upon the outer, the other upon the inner side of the leg, directly opposite to one another, as though they were pinned together through the leg, from which they derive the denomination of *pegged*. The third is the splint which ascendeth to the knee, and almost always maketh a horse to halt. The fourth is the (la tumeur) fusee, which is two splints joined at the ends, one above the other. The last (the fifth) is the little bony excrescence (osselet) which is upon the knee, and may be taken for the very substance of the knee itself, unless a

man have very great experience" ("Compleat Horssman," Hope's translation second edition, part ii., sect. 6, p. 95).

We may add to the above list a sixth, termed occult splint, where there is simply obliteration or osseous transformation of the fibro-glutinous material between the large and small metacarpal, without external enlargement.

I need scarcely observe that splint are so general that, except under certain conditions, horses may be pronounced sound with their existence, though *under all circumstances it is essential their presence should be mentioned in a certificate of examination.* Indeed, as Mr. Percivall says, "were this question" (as to the soundness of a horse with splints) "to be answered in the affirmative, there would be, we are afraid, remaining but few horses that could be called sound, after the completion of their adult period of life. That a horse going lame in consequence of splint, or that cuts from splint so as to occasion himself lameness, is unsound, there can be no doubt whatever. Unless, however, one or other of these ill consequences could be shown to result, no importance whatever need be attached to the presence of splint. It is possible, as now and then, indeed, happens, that splint may, from its magnitude or conspicuous situation, amount to an eye-sore or blemish; this might somewhat disturb the question of soundness, though we very much doubt, after all, that such case of magnitude simply could be construed as equivalent to unsoundness."

Still, after the latitude given by Mr. Percivall, we are constrained to admit that splint is the cause of much vexation; in fact, I am not exaggerating when I state that many of what are looked upon as obscure cases of lameness are due to the presence of what is now so frequently passed over in examinations as to soundness, viz., splint. If the latter is well forward, and a far distance below the knee, and the action sufficiently wide to escape its being struck, it is considered by some individuals, irrespective of its character, harmless. The animal, on this opinion, is purchased, goes to work, and ere long the jar on our macadamised roads tells its tale. The little splint increases in size, the animal evinces pain on pressure there, and the part is abnormally warm; or on the contrary, no increase of size may be apparent, but yet withal the soreness exists, with attendant lameness, and much disappointment ensues to the owner of the animal. Many and various are the opinions given; and, without wishing to arrogate to myself, as a young practitioner, any special ability in diagnosis, I venture to think that the foot and the shoulder have far too frequently to bear the brunt of the mischief due to the little over-looked splint.

Age, too, is considered by some a safeguard against splint lameness. Young horses are thought most liable to it, and I cannot contradict this assertion; but it certainly is of briefer duration, and not of so serious import as when the lameness occurs in aged horses. It is an old *splint reactive* which is most troublesome, and it is this kind of splint, which is so often overlooked on account of its long existence, that usually requires most attention.

The three worst types of splints, including the last-named, are those immediately under or associated with the knee-joint; those which are exceedingly prominent, and liable to be struck by the opposite foot; and third, those situated backward, and which interfere with the ligament. This latter, the late Professor Spooner was wont to observe, "is more serious, on account of interfering with the surrounding tissue. It is not the tendons, as some people suppose, that are affected or interfered with, but the long suspensory ligament into which the speculi of bone enter and set up great irritation [or by friction between the ligament and roughened surface of the exostosis.—J. W. H.] Some persons say, 'Oh, it is on the bone,' meaning the cannon or large metacarpal: 'it cannot produce lameness;' but we, as veterinary surgeons, know that we cannot have acute inflammation of bony

excrescence on a limb without pain and lameness. It will exist weeks and months in the incipient or occult stage, and we may feel the throbbing of the artery long before the splint appears."

Regarding the peculiarity of splint lameness, Professor Williams makes the following remarks :—"The lameness may precede the appearance of any swelling or deposit, and in such a case it is apt to be confounded with that arising from other diseases [this, I may observe, is particularly the case in occult splint.—J. W. H.]. But if the following observations are kept in remembrance, no mistake need be made :—

"1st. The age of the animal. The young horse is most liable to splint lameness, the older horse to navicular disease.

"2nd. The peculiarity of action. A horse lame from splint will walk apparently or nearly sound, but will trot very lame, the drop of the head and body on the sound side being very great, and out of all proportion to the apparent soundness of the walk.

"3rd. A want of flexion may be observed at the knee.

"4th. When the patient first comes out, and is made to trot, he may go moderately sound, but after a time the lameness increases, the concussion being a cause of pain. In navicular disease the lameness generally decreases with exercise.

"5th. Pressure upon the part of the leg where splint is likely to be will cause pain ; some heat is present, and, by a careful manipulation, a hard swelling, perhaps smaller than a pea, may be felt. In some cases the esostoses soon develop themselves, and then there can be no further difficulty ; but in others this does not occur for several weeks, and these are most unsatisfactory to the surgeon. In some rare cases the lameness is very excessive, the horse being scarcely able to put any weight upon the affected limb ; standing with the toe only touching the ground, with great heat and swelling of the part affected, at the same time suffering from constitutional disturbance to a considerable degree."

Concerning the treatment of splint, a host of remedies have been from almost time immemorial laid down. Looking through some ancient works on farriery, styled "The Government of Horses," published in 1591, I was interested and much amused with the various methods of treatment prescribed. Rubbing with a knotched hazel stick across the splint, beating the substance until soft, and subsequently incising and removing the black blood ; pricking with an awl all over, and applying hot grease ; a black snail slit open, filled with salt, and applied each day to the exposed limb, or the core of a roasted onion filled with bay-salt ; slitting the skin the length of the splint, and applying warm wine, verdigris, corrosive sublimate ; or having laid bare the splint, and making about it a coffin of clay, all open to the top, and pouring into the wound scalding bear's grease until the clay coffin be full, are severally set down, amongst many others, as sovereign remedies ; indeed, concerning the latter, we are instructed to let it rest until the grease be cold, after that let the horse rise, and this, with one dressing, will take the splint clean away without any blemish or eye-sore. Such knobs, as a matter of course, are to be taken away at the beginning or after the full of the moon.

Passing to more modern surgery, we have offered for our consideration, externally, iodine, biniodide of mercury, cantharidis, acetic acid, and firing ; secondly, as stronger measures, caustic, pyro-puncture, chiselling, and subcutaneous periosteotomy. Iodine and biniodide of mercury are especially serviceable as absorbents when the splint is young. Cantharides and acetic acid are more adapted to those of longer duration. Caustic is most useful in diffused splint : the operation, as you know, consists in making an incision at the inferior portion of the splint or immediately below it, breaking down

the areolar tissue between the skin and the splint, and inserting a pledget of tow saturated with hydrochloric acid, a solution of bichloride of mercury, or some other strong agent. Pyro-puncture is recommended in obstinate cases: the instrument is to be made hot, and applied with sufficient pressure to pierce the skin, and to enter the new deposit.

Chiselling consists in chipping or chiselling off the entire splint. I believe Professor Williams has frequently performed this operation, and I have also seen my late partner, Mr. Cartwright, perform it, but have myself no personal experience. Regarding the last-named operation, I have already observed that "it is an *old splint reactive* which is most troublesome," and this kind of splint I have successfully treated by sub-cutaneous periosteotomy. For some years I have practised this well-known and simple operation, and from the favourable results obtained, I continue to do so; indeed, to use the late Professor Spooner's words, "I am decidedly of opinion we cannot dismiss the operation from veterinary practice." The operation consists in making an incision through the skin immediately below the splint, breaking down the areolar tissue over it, and then inserting flatwise the periosteotomy knife or scalpel as far as the splint reaches, turning the cutting edge on to the most prominent portion of the splint, and pressing externally on the back of the blade until the periosteum is divided, and the new substance entered. In most cases I insert a small seton immediately afterwards, the time of its removal to be regulated according to circumstances.

The effect of relieving the tense condition of the periosteum is not the only point gained, for in several instances the splint has entirely disappeared; for, as Mr. Spooner remarks, "by passing the knife into the substance when not fully developed, we divide the nerve part and make it numb, causing suppuration, and producing new action." In other words, we create a destructive process, and subsequent re-absorption of the liquefied part. Inflamed bone, whether it be bone proper or a deposit, is excessively painful, and the same will apply to the periostial membrane, as a blow on our own shins will testify. Hence the acute lameness arising from splint.

I have dwelt more on this operation in the hope that so simple a measure, with such successful results, may be more generally adopted; for it is at the present time more a disused than an abused one.

I now proceed to make a few remarks on Bone Spavin. The word spavin is derived from many sources. Blundeville calls it "the spavin," the Italians *spavano* or *spavanagno*, the Spanish *esparavan*. It is derived from the Greek σπάσμα, or from the Latin *spasmus*, meaning a spasmodic or catch-up action of the limb when in motion. The old French term it *espavent*, the modern French *éparvin*. It has again been derived from the French adjective *épars*, or from the Latin one *sparsus*, from the animal being supposed to go with a straddling gait. "Shakspeare has introduced the word into two of his dramatic pieces. His fantastic description of the nag upon which 'the mad Petruchio' was seen coming to claim his bride," says Percivall, "will never be forgotten:—'His horse hipped, with an old mothy saddle, and stirrups of no kindred; besides, possessed with the glanders, and like to mose in the chine; troubled with the lampass, infected with the fashions, full of wind-galls, *sped with spavins*, raied with the yellows, past cure of the fives, stark spoiled with the staggers, begnawn with the bots, swayed in the back, and shoulder-shotten.' Again, in his play of Henry VIII., the bard has used the word in his caricature account of the gait some English gallants had acquired by their travel in France:—

> "'One would take it,
> That never saw them pace before, *the spavin*
> And stringhalt reigned among 'em.'"

The difference of professional opinion is probably never more marked than in the examination of a horse's hocks. We hear it said, "The hocks are not a pair, but that is no detriment." Again, "They are rough hocks, or coarse, but sound," or "They are congenitally prominent in the seat of spavin, but there is no abnormal deposit." In fact, as Professor Williams remarks, "it is of importance that a veterinary surgeon be a good judge of a hock; for what may be a spavin in one horse may be a mere peculiarity of conformation in another." This must not, however, be misinterpreted, for whatever exists as a spavin in one horse, if it exists and be of the same nature in another horse, it must likewise be a spavin. I opine, therefore, the Professor intends to convey that an enlargement in the seat of spavin may, or may not, be a spavin. He further says, "Many horses are foaled with irregular hocks, very often with one hock larger than the other; and such are apt to be condemned as being diseased and unsound. Experience, however, proves that a young horse, rough in his hocks, if put to work before he has arrived at his full growth, is apt to fall lame; and that the same animal, if allowed to rest until he is old enough for work, will remain sound for many years, although a marked disparity may exist between the two hocks. Again, a horse at four years old will look coarse in the hock, or even spavined; but when he is six the same horse will appear quite fine and sound, provided he has been properly cared for."

Now, a bone spavin, as we all know, consists of an exostosis on the inner and lower part of the hock, inclining usually to the anterior, and involving the cuneiform and metatarsal bones, and arises from inflammation of the ligamentous structure connecting those bones, and subsequently of the bones themselves; or inflammation of the latter may exist primarily and independently. Anchylosis of the affected joints is produced, and consequent stiffness and lameness result. Like splint, spavin may be occult. To use Professor Spooner's words, "Horses may evince considerable lameness in the seat of spavin, and yet have no bony excrescence. On the other hand, a horse may have an enlargement as big as a pigeon's egg, and yet without lameness." Spavin being usually situated on the inner side of the hock is accounted for by that part being more under the centre of gravity, and therefore more liable to concussion.

I shall not dwell on the symptoms of spavin lameness, beyond remarking that a horse so affected invariably exhibits the abnormal action most prominently after standing at rest some time, and that the rigidity and stiffness decrease with exercise, often after some distance has been traversed entirely disappearing, then when rested after such exercise he comes out decidedly lamer. Not unfrequently also spavined horses do not get the heel well to the ground, in some cases not at all, and the toe of the shoe in consequence will be found unequally worn in proportion to the heel.

Concerning the treatment of spavin, the enumeration of ancient remedies is quite as manifold as those set forth for splint. Markham, in his work, recommends a corrosive application on the exposed spavin, of unguentum and white mercury, which after instructions how to use he states, "Within a day or two you shall see the whole crust of the spavin come cleane away, then you may with the same salve heal up the wound; and this hath never failed me in any practice." I fear the old practitioners drew more on imagination than results. Time will only now permit me to speak of more modern treatment, or rather those measures yet resorted to. These may be enumerated as follows: the application of iodine, biniodide of mercury, cantharidis, setons, causticing, and firing. In incipient spavin I have seen the first-named agent used with benefit, either in the form of ointment or tincture: it may be applied daily until the hock is much swollen, it should then be left off until the joint has assumed its previous dimensions, after

which it may be again applied, and so on according to circumstances. The biniodide of mercury is also an excellent agent: the usual strength is one to eight used as a blister, but I find myself its continued use in a milder form is more serviceable than one strong application, hence I recommend one to twelve or fourteen, gently rubbed on daily, until sufficient irritation has been produced, and then, like the iodine, suspended for a time. Cantharidis is useful as a counter-irritant, and its action may be promoted by the addition of terebinth: combined with biniodide of mercury, it forms, as you all know, a very valuable compound blister. Concerning the use of setons in spavin, the Veterinary College at one time used them frequently, and reported success.

The operation of causticing finds favour with many veterinarians, particularly in the north, and I may say for myself I prefer it to almost any other treatment. It has been asserted that this operation is practised for purposes of deception, to make both hocks alike. The insertion of the caustic, according to Professor Williams, "causes inflammation and a filling up of the hollow beneath the spavin; in fact, it hides the latter by elevating the former. Upon the 'fine' hock the caustic is pushed up, and lodged in the spot where the *spavin ought to be.* This makes the one hock as coarse as the other—the coarse one apparently finer than before the operation, the fine one coarser." The operation, however, as I witnessed it when a pupil in Yorkshire, was not adopted for any such purpose, but purely as a remedial method, and only on spavined hocks. A small incision was made immediately below the spavin, and a small tent of tow saturated with a smart stimulant was inserted sub-cutaneously and *opposite to, not below* the spavin; direct counter-irritation is at once established, and whether the operation, according to Professor Williams, removes the lameness of spavin by exciting the exudation of lymph and hastening the process of anchylosis or not, it is certainly attended with less pain than firing, creates little or no blemish, and in incipient spavin is more beneficial than any other measure I know of. I cannot call to mind having made a *post-mortem* dissection of a hock so operated on, but I am of opinion the suppurative action promotes absorption of the ossific deposit, as I have known hocks become much finer after causticing.

Regarding the actual cautery, nearly every member of the veterinary profession believes in firing, and, unfortunately, scoring hocks is with some almost a mania. That it is beneficial, there can be no question, especially in chronic and diffused spavin, and, in addition to its other effects, the hock has the support of a permanent bandage: of this latter, which has been a controversial question, I am myself convinced. But it has often struck me how often firing is extended beyond its requirements, and how much greater amount of cutaneous structure is blemished than is really needful. In some cases I have seen the lines carried forwards and backwards, as in feather firing, obliquely down on to the metatarsal bone, and as unproportionately high.

In small deposits this is not requisite or desirable, and never should a horse's hock be made use of as an advertisement of veterinary artistics. "Ain't it like writing?" observed a dealer to me the other day, when firing his animal. And of course our object should always be to operate neatly, though effectually, and as little after an eye-sore as possible.

I have, for some time past, in firing for spavin abandoned the feather pattern, and drawn my lines perpendicularly over the seat of spavin, and a short distance on either side. This, I find, shows considerably less afterwards, and the subsequent cutaneous contraction is more in the direction of a bandage.

In the few remarks, gentlemen, I have thus hurriedly thrown together, I trust I may have excited sufficient interest to promote a discussion which

may be productive of good results. To quote a quaint couplet published as an introduction to a veterinary work produced in 1619—

"Although the learned have revealed
The helps for time great store,
Yet practisers therein again
Have found for them much more."

I have now the pleasure of placing before you a few specimens collected together within the last few days, as illustrative of some of the diseases I have brought under your notice, together with others in which you may feel some interest—viz., splint, laminitis, navicularthritis, calculi, lusus naturæ, and a malformation kindly sent me yesterday by one of our worthy brethren, Mr. Hodgkinson, of Uttoxeter.

Accept my cordial thanks for your attention and forbearance, and I merely ask in return an expression of your valuable opinions. It has been said, "Iron sharpens iron," and by attrition a genial flame is enkindled. May such be the result of my efforts.

MIDLAND COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE forty-second meeting of the Midland Counties Veterinary Medical Association was held at the Bell Hotel, Leicester, on Friday, April 1st, 1881.

In the absence of Professor Pritchard, President of the Association, Mr. Harry Olver, Vice-President, occupied the chair. There were present—Mr. Blakeway, Stourbridge; Mr. Greaves, Manchester; Captain Russell, Grantham; Mr. W. Wragg, London; Mr. E. Stanley, Warwick; Mr. Beddard, Wolverhampton; Mr. H. D. Pritchard; Mr. Faulkner; Mr. H. M. Stanley, Birmingham; Mr. Wiggins, Market Harborough; Mr. O. J. Hills; Mr. Blunt; Mr. Ison; Mr. Russell, Sandiacre; Mr. Atkins, Loughborough; Mr. Careless, Worcester; Mr. Goulé, Malvern; Mr. Meek, Walsal, and others Letters of apology were received from several absent members.

The minutes of the last meeting having been read and confirmed, Mr. Blakeway, the treasurer, gave a very satisfactory statement of the accounts of the Association.

Election of Officers.

Mr. Greaves proposed Mr. Olver, Tamworth, as President for the ensuing year. Mr. Blakeway seconded; put to the meeting, and was carried unanimously.

Mr. OLVER thanked the meeting for the honour they had done him, and said that he would do all he could to prove to them that they had not misplaced their confidence.

Mr. Blakeway proposed Mr. Edward Stanley, Warwick, as Secretary. Captain Russell seconded; he was duly elected.

Mr. Greaves proposed the re-election of Mr. Blakeway as Treasurer, alluding to the very able manner in which he had conducted the duties of the office. Mr. Meek seconded. Carried unanimously.

The Vice-Presidents were elected by ballot—Captain Russell, Mr. Henry M. Stanley, and Mr. Wiggins.

Mr. Blakeway was proposed and elected candidate to represent the Association on the Council at the forthcoming election.

Captain RUSSELL introduced a very neat instrument for maintaining in apposition the edges of large wounds during the healing process.

Mr. GREAVES, on behalf of the meeting, thanked him for having shown and explained so useful an invention.

The Chairman then called on Mr. GREAVES to read his paper on the Penal Clause and the Apprenticeship Clause; it was most interesting and exhaustive, placing the subject in many ways previously unthought of by many members of the meeting. Owing to the lateness of the hour, the discussion was postponed until the next meeting, which will be held at Tamworth.

Mr. Wiggins proposed a vote of thanks to Mr. Greaves, which was seconded and carried.

The members adjourned to dinner.

EDWARD STANLEY, *Hon. Secretary.*

WEST OF SCOTLAND VETERINARY MEDICAL ASSOCIATION.

A MEETING of the members was convened in the Veterinary College, Glasgow, on Wednesday, May 4th, 1881. Vice-President, Mr. R. Mitchell, Carrick Street, Glasgow, in the chair. Present, Mr. Rutherford, Edinburgh; Mr. Archibald Robinson, Greenock; Mr. Lindsay, Alloa; Mr. Douglas, Dunoon; Mr. Peddie, Cathcart; Mr. Jarvie, Carluke; Messrs. Weir, Prentice, and McQueen, Glasgow; and the Secretary. After some formal business, Mr. Weir, Glasgow, read the following paper upon "Frost-bite in the Horse":—

I desire to bring before you, very briefly, that diseased condition of the coronet and structures near the foot, characterized by sloughing of the skin and subcutaneous tissues, differing in size and situation, and so contributing to make the disease more or less serious, according to these variations. The opinions of the profession would seem to differ in some respects regarding the nature and origin of this disease, although all are agreed thus far, that cold weather has a great deal to do with it, but in what manner has never to my mind been very satisfactorily explained in any writing on the subject I have seen. I will endeavour to describe the disease as I have found it in my practice, and, by giving my own opinion on the matter, if I can provoke a lively discussion, no doubt we shall all benefit therefrom.

The chief symptom is sudden lameness. It may be that nothing amiss was noticed in the evening, but in the morning the horse can hardly go round in the stall; or, as I have seen frequently, the horse has stood for an hour or so while loading or unloading, and when the carter starts him he finds the animal lame. The animal while walking tucks up the foot, and when you run the hand down the limb the fingers probably, in searching round the coronet, light upon a spot which causes the horse on the slightest pressure to pull the limb convulsively up, and to evince great pain. The part is cold and moist, the limb swollen, the swelling extending upwards, the hair erect, and the moisture a very bad smell. If you look narrowly, you will see around the part a fiery ring of inflammation. In two or three days this line of demarcation becomes better marked; pus is seen to issue from one or more parts; an ulcerative process is set up, and this encircling the dead part or slough, it drops out, or is easily separated by the forceps, leaving an ugly, irregular, granulating surface. Whenever the ulceration is properly established the lameness begins to disappear, and by the time the slough has been separated it is entirely gone in a great many cases. The swelling also subsides rapidly, and the wound takes on a healthy appearance; the granulations spring up quickly, and the part soon heals, leaving a scar of greater or lesser dimensions, and of a cartilaginous or horny nature. In some cases the slough is small, and causes no great uneasiness; in others it is deep and large; in others the skin over a large surface drops off, the deeper textures escaping; while in some again we have points of ulceration extending up and around the fetlock, with no well-marked sloughs, the matter oozing from numerous fistulæ, and frequently this also is accom-

panied by sloughing farther down. In these cases the disease gives rise to great constitutional disturbance; the horse is fevered, refuses his food, and at times is found sweating from the extreme pain; Diarrhœa may now set in, and ultimately coma and collapse, and the animal dies from Septicæmia. I understand that some practitioners have seen cases of Pyæmia follow diseases of the feet, but I have never met with one.

Pathology.—An eminent writer of our profession calls the disease "Carbuncle of the coronary band," another prominent member terms it "Furunculus of horses' heels;" and it has been variously designated "Frost-bite," "Sphacelus of the coronet," "Sloughing Ulcer of the coronet," etc. We may, therefore, take it as granted that each of the authors, by giving it the name he has thought most appropriate, has so far expressed his views as to the nature of the disease. The writer of the article on "Furunculus of Horses' Heels" in the *Veterinarian* for April, 1875, states, "The disease is due to a peculiar cachexia or disordered state of the blood, predisposing the animal to diseases of this class." And farther on he says, that "by some the core is said to consist of dead areolar tissue, but in reality it is a product of the inflammation, an exudate in fact." The writer on "Carbuncle of the Coronary Band" also states his belief that it is due to a blood poison. Now these are views which I hold to be entirely erroneous, and until they are clearly demonstrated I unhesitatingly reject them. The fact that most cases of this disease take place immediately after a severe frost and during a thaw, or during a period when we have repeated and rapid changes from frost to thaw, and *vice versâ*, would at first seem at variance with the name I have chosen—viz., Frost-bite; but when carefully considered, in my opinion, it gives the correct clue to the pathology of the affection. It must be conceded that it is much more common in cities and large towns than in the country, and in my opinion is due solely to severe frost, or to freezing mixtures which by direct or indirect means are mixed with the slush of cities. Common salt, for instance, which is largely mixed with snow or melted ice in our own city, I hold to be the chief factor in producing the disease. To make my theory perfectly plain, I will give a few extracts showing the basis I rest it upon:—

(1) "Ice in melting absorbs as much heat from surrounding bodies as would raise the same bulk of water to 140°, and water in passing into steam absorbs as much heat as would raise the same bulk to 1,000°."

(2) "Twenty-five per cent. of common salt in water lowers its freezing point from 32° to 4°; hence water frozen at 32° is liquefied by twenty-five per cent. of common salt, till the thermometer falls to 4°, and in proportion for other quantities of salt."

(3) "When snow or pounded ice is mixed with salt or acids, these dissolve the solid crystals into fluid, and in converting solidity into fluidity withdraw heat from surrounding bodies so as to be capable of producing a cold of 70° below zero."

(4) "Water in freezing evaporates as much as by direct heat, and ice evaporates largely. As evaporation carries off the most mobile atoms of heat it produces coldness in the body."

The snow water and salt cause a very low temperature, and, by splashing the coronet and dependent parts of the limb, produce intense cold; if the horse stands for a short time, the evaporation of the freezing mixture, by absorbing heat from the integuments beneath, decreases the temperature still more and more; the blood is gradually driven from the capillaries of the part by the great and increasing cold, until the vessels empty and the part is dead. The slough is of a whitish colour, proving, to my mind, that sphacelus of the part has taken place without being preceded by inflammation, and differing altogether from the slough of *moist* gangrene, which is of a black appearance, the vessels having been strangulated from excessive repletion, and where the

blood has transuded through the walls. The sphacelus or slough acts as a foreign body, and as such sets up inflammatory changes in the part; the part is no sooner dead, or rather in the process of dying, than nature is limiting and preparing at the same time to throw off the stranger. The ends of the capillaries are sealed with organized lymph; the liquor sanguinis and leucocytes escape from the vessels of the inflammatory zone; these emigrants proliferate, and with the cells of the tissue form pus, which escapes from beneath, through "the line of demarcation," and carries off along with it the ulcerative *debris*. All these changes take place in the living tissue: the dead part can do nothing. The extreme pain, redness, heat, swelling, and the formation of pus must take place, or, instead of the slough being thrown out, it will be held a prisoner. The parts well protected by hair are less liable to be affected, because hair is a bad conductor of heat. We can therefore easily perceive, from this and the law of gravitation, how it is that the hollow of the pastern is frequently the seat of the mischief.

Treatment and Prevention.—The situation of the slough is of great importance, as it is much more easily healed in some places than others: for instance, if behind the pastern, the movements of the limb retard the healing process; and if near the coronet or lateral cartilages, Quittor is apt to ensue. Sometimes the sensitive frog is the seat of the disease, and the navicular bursa becomes involved, with a discharge of synovia; and in one case I have seen the pastern joint opened from a very deep slough at the coronet on the outer side of the foot. Our first object is the removal of the dead part, and to accomplish this fomentations and poultices, I think, will be found the best treatment. The constitutional treatment consists in attending to the symptoms as they arise, and often it is not necessary to do anything. If much pain and fever, anodynes and sedatives should be given. In any case, I think, a little saline medicine is advantageous. When the slough has been removed the granulations may be stimulated by carbolic or turpentine dressings. As soon as the granulating surface is level with the skin, remove the bandages and dust the foot with powdered alum, or wash it with common white or other astringent lotion. Quittor and open-joint demands special treatment; but the animal should not be allowed to work until the parts are beginning to contract and the cicatrix to form, especially if the coronet or lateral cartilages have been involved. If the slough is well up above the coronet, the animal may be put to work in a day or two after it has separated, being careful to have the part bandaged during the day and dressed at night. If the constitution of the patient is low, liberal diet and tonic medicine are urgently required, because the sloughs have a great tendency to spread. The application of the actual cautery or lunar caustic round the edges checks the tendency. The prevention of this and other kindred diseases, as "Mud-rash," "Cracked Heel," etc., which I hold to be due to one and the same cause, and only differing in degree, is to preserve the natural covering, the hair, as much as possible on the dependent parts of the body. Dry the limbs thoroughly, and avoid cold draughts. In harness-horses and others where the heels are exposed, and in clipped horses, anointing the limbs as far up as the knee and hock with a little lard or olive oil would prevent all the mischief, by checking the evaporation; and this, I think, may explain how "greasy heels" escape the effects of cold so well as they do.

The discussion of this paper was postponed till next meeting.

J. MACQUEEN, *Secretary.*

YORKSHIRE VETERINARY MEDICAL SOCIETY.

THE spring quarterly meeting was held at the Queen's Hotel, Leeds, on Wednesday, the 13th April, the President, Mr. J. H. Ferguson, in the chair.

The following members were also present—viz., Messrs. M. E. Naylor, Jas. Freeman, J. W. Anderton, Peter Walker, J. M. Axe, P. Deighton, R. L. Robertson, W. G. Schofield, J. Tatam, G. E. Bowman, and the Secretary.

Apologies for non-attendance were received from G. Fleming, Esq., Prof. Williams, E. C. Dray, Joseph and John Freeman, F. Danby, J. Bale, H. Snarry, G. Hardie, and F. A. Kirke.

The PRESIDENT proposed, and Mr. ANDERTON seconded, the election of Mr. Jno. Tatam, M.R.C.V.S., Leeds. Carried unanimously.

Mr. PETER WALKER proposed, and Mr. ROBERTSON seconded the election of Mr. G. E. Bowman, M.R.C.V.S., Leeds. Carried unanimously.

The ensuing election of Members of Council was next discussed, when, upon the motion of Mr. NAYLOR, seconded by Mr. FREEMAN, it was unanimously resolved: That this committee combines with the Lancashire, Liverpool, and Midland societies in endeavouring to return Messrs. Naylor, Reynolds, and Blakeway, and that the Secretary be empowered to take the necessary steps to ensure their election.

The SECRETARY read some correspondence respecting the preliminary details of the Veterinary Congress to be held in London in July next, and after some discussion, it was resolved that the members of this society be invited to subscribe 10s. 6d. each to the guarantee fund, the following names being given as subscribers: Messrs. Naylor, Jas. Freeman, Anderton, Peter Walker, J. M. Axe, Ferguson, Robertson, Tatam, Bowman, W. G. Schofield, and the Secretary.

The discussion upon Mr. Fleming's paper on the castration of Cryptorchid horses, was the next subject for debate, but as the essayist had pretty well exhausted the subject in his paper, and the members present did not possess much practical experience upon this subject, the discussion was not very interesting. Messrs. Naylor, Freeman, Tatam, and other gentlemen gave their opinion upon this operation.

It was resolved to hold the next meeting early in July, the week previous to the meeting of the Veterinary Congress.

ROYAL COLLEGE OF VETERINARY SURGEONS.

AT the several meetings of the Scottish Section of the Court of Examiners of the R.C.V.S., held in Edinburgh, on the 26th and 27th April, the following students passed their Final Examination and received the Diploma:—

Edinburgh New Veterinary College.

Mr. W. Woods†	Wigan, Lancashire.
„ Fredk. Whittaker*	Bury, Lancashire.
„ Wm. Graham	Cummertrees, Dumfriesshire.
„ Henry Cooper	Huddersfield, Yorkshire.
„ Isaiah Leather	Liverpool.
„ F. H. Osgood*	Mass., U.S.A.
„ I. H. Riches	Norwich.
„ A. F. Appleton*	Suffolk.
„ C. J. Martin...	Chesterfield.
„ Thos. Green	Manchester.
„ W. O. Williams*	Edinburgh.

Edinburgh Veterinary College.

Mr. J. Gibson	Kirkwall, Orkney.
„ Thos. Gilchrist	Lanark.
„ William Fairbairn	Kelso.
„ J. A. Thompson*	Ballynahince, Co. Down.

Mr. W. J. Powell*	... ...	Gamlingay, Cambridgeshire.
„ R. W. Burke*	... ...	Hapur, India.
„ I. R. D. Beech*	... ...	Dublin.
„ I. I. Doyle*	... ...	Enniscorthy, Co. Wexford.
„ Peter Manwel	... ...	Linlithgow.
„ R. W. Powell	... ...	Shefford, Bedfordshire.
„ W. W. Dollar†	... ...	London.
„ W. Cassells	... ...	Lanark.
„ L. L. Leach	... ...	Boston, Lincolnshire.
„ G. M. Davey*	... ...	Manchester.
„ Thos. Wright	... ...	Manchester.
„ J. A. Bull*	... ...	Tysoe, Warwickshire.
„ John Roberts*	... ...	Wrexham.

At the several meetings of the Scottish Section of the Court of Examiners of the R.C.V.S., held in Glasgow, on the 28th and 29th April, the following students from the Glasgow Veterinary College received the Diploma :—

Mr. Wm. Pettigrew	... ...	Lesmahagow, Lanarkshire.
„ R. Roberts	... ...	Colwyn, Denbighshire.
„ H. Rogers, junr.	... ...	Bombay.
„ Wm. Watt*	... ...	Stirling.
„ J. Freeman, junr.	... ...	Clontarf, Dublin.
„ F. Foster*	... ...	Glasgow.
„ Jas. A. Gosling	... ...	London.
„ R. Black*	... ...	Lundie, Forfarshire.
„ Wm. Stewart	... ...	Glasgow.
„ Alexr. Cochrane	... ...	Grangemouth, Stirlingshire.
„ Richard Ebbitt *	... ...	Louth, Ireland.
„ Thomas Maclay	... ...	Glasgow.
„ Alexr. Macadam*	... ...	Paisley.
„ John Blakeley	... ...	Ballymence.
„ Robert Glass	... ...	Glasgow.
„ Hugh Bradley*	... ...	Newry, Ireland.
„ John Smith	... ...	Ulverston, Lancashire.
„ Jas. Nisbet	... ...	Galston, Ayrshire.
„ E. B. McLay	... ...	St. Normary, Stirlingshire.

The following students passed their Second Examination at the meetings of the Scottish Section of the Court of Examiners, held in Edinburgh, on April 19th, 20th, and 23rd :—

Mr. T. D. Connochie.*
„ W. J. Smith.
„ Thos. Horton.
„ G. W. Tinnors.*
„ D. McArthur.*
„ J. F. Murray.*
„ R. M. Sunderland.
„ James Wade.*
„ George Phelan.*
„ T. C. Bradshaw.
„ John Brizell.
„ T. J. Mitchell.*
„ D. S. Prentice.*
„ Fredk. Wood.*
„ Bernard Martin.

Mr. H. H. Harrison.*
„ J. H. Carter.
„ Tom Harrison.†
„ W. C. Crowdan.
„ John Carroll.*
„ W. F. Greenhalgh.*
„ Saml. Bailie.*
„ P. D. Reavy.
„ Joseph Abson.*
„ Robert Cockburn.*
„ G. W. Tennant.
„ Christopher Jones.
„ T. E. Horrocks.*
„ Peter Dalling.
„ W. Edmondson.*

Mr. John Finlayson.†
„ E. T. Edwards.
Mr. Richard Jones.*
„ T. A. Mitchell.

The following students passed their Second Examination at the meetings of the Court of Examiners, held in Glasgow, on April 21st and 22nd :—

Mr. J. D. Gennmell.*
„ T. M. McCauley.
„ Thos. Sherwood.
„ J. S. Bond.*
„ A. McNicol.
„ R. J. Macguire.*
„ W. A. Macgregor.†
„ T. F. Alston.
„ James Martin.*
Mr. John Renfrew.*
„ Wm. Wallace.
„ J. G. Dickie.
„ P. D. Kelly.*
„ Josh. Hughes.*
„ John McLean.
„ John Freeland.*
„ Wm. Wright.
„ Alexr. Brown.
Mr. Wm. Shand.*

The following students passed their First Examination at the meetings of the Court of Examiners, held in Edinburgh, on the 11th April, 1881 :—

Edinburgh New Veterinary College.

Mr. Arthur A. Stringer.
„ Charles Winslow.*
„ James J. Ashton.
„ James Platt.
Mr. Albert Prestwich.
„ Thos. J. Davies.
„ Wm. H. Wood.
„ James Hill.
Mr. Mason V. Ryder.

Edinburgh Veterinary College.

Mr. John Japp.*
„ Arthur New.*
„ John F. Mahony.
Mr. Wm. J. Marsden.
„ W. A. Young.*
„ James Jervis.

* Marked thus passed with Great Credit.
† Marked thus passed with Very Great Credit.

ROYAL (DICK) VETERINARY COLLEGE.

On April 27th, in the Council Chambers, the prizes were presented to the students who have completed with distinction their term of study in the Royal (Dick) Veterinary College. In the unavoidable absence of the Lord Provost, Bailie Hall occupied the chair, and in opening the proceedings said it gave the trustees of the institution great pleasure to hear of its continued prosperity. Year after year the number of students increased, and their qualifications were also improving. In addition to that, the greatest harmony existed between students and professors, without which no institution could prosper. Professor Walley then made a few remarks, in which he stated that the prizes to be presented had not been competed for alone this year, but during the three years of which the sessional course consisted. In consequence of its having formerly been found that students who gained merely certificates of veterinary colleges set themselves up as veterinary surgeons, the rule had now been made that no student should obtain possession of his prizes until he had gained his diploma.

Professor Walley also directed attention to the fact that during the enforced absence from the College (from illness) of Professor McFadyean, an old student, Mr. C. Rutherford, had come forward and filled his place ; and further, that another old student—Mr. A. Grey, jun.—had conducted successfully a class in practical pathological anatomy.

The prizes were awarded as follows :—

Botany.—W. W. Dollar, Silver Medal.

Chemistry.—(1) W. W. Dollar, Gold Medal ; (2) J. J. Doyle, Silver Medal.

Materia Medica.—R. W. Burke, Silver Medal.

Junior Anatomy.—W. W. Dollar, Silver Medal.

The competition for these prizes took place during session 1878-79.

Anatomy (Senior).—(1) W. W. Dollar, Gold Medal ; (2) R. W. Burke, Silver Medal ; (3) J. J. Doyle, Silver Medal.

Physiology.—(1) W. W. Dollar, Gold Medal ; (2) R. W. Burke, Silver Medal.

The competition for these prizes took place during session 1879-80.

Horse Pathology.—(1) W. J. Powell, Gold Medal ; (2) J. A. Thompson, Silver Medal.

Cattle Pathology.—(1) J. J. Doyle, Gold Medal ; (2) W. J. Powell, Silver Medal.

Prize given by Dr. Wood for best Clinical Examination of Horses—Powell.

Prize given by Professor Baird, for best Practical Examination of Horses as to Age and Lameness—P. D. Reary.

Prizes for best essays read before the Veterinary Medical Association during session 1880-81—(1) W. W. Dollar, Gold Medal ; (2) R. W. Burke, Silver Medal.

For best communication read before the Association—J. J. Doyle, Silver Medal.

Prize open to amateur students for best examination in Elementary Veterinary Medicine and Surgery—T. A. Buttar, Silver Medal.

Honourable Mention—John Roberts, Lionel L. Leach, James Gibson.

Mr. W. W. Dollar also obtained the Gold Medal of the Highland and Agricultural Society for the best General Examination. After the presentation had been made, Dr. Alex. Wood congratulated the Principal and professors on the present prosperous condition of the College. Professor Branford, who has recently returned from Cape Colony, was then called upon, and made a few remarks, in the course of which he expressed the hope that the time would come when Parliament would extend to the veterinary profession those privileges and that protection which were at present enjoyed by the medical profession. He argued that there was an equal amount of mental strain in the two classes of students, and in some instances this strain was even greater in the case of the veterinary students. It was admitted by high authorities that much had been learned in medical science through the work of the veterinary profession. He pleaded for the same rights and privileges being extended to the practitioners of veterinary medicine as in the case of general medical practitioners.

The proceedings were closed with votes of thanks to the Principal and professors of the College, to the various gentlemen who took a lively interest in it, and to the chairman for presiding.

GLASGOW VETERINARY COLLEGE.

THE winter session of this institution terminated on April 18th, and on the 21st, 22nd, 28th, and 29th, the oral and practical examinations of the Royal College of Veterinary Surgeons were conducted within the College. The results are published elsewhere in the Journal. Medals granted by the Highland and Agricultural Society of Scotland, Professor Allen Thomson, London ; Robert Walker, Esq., of Lethamhill ; and Principal M'Call, and certificates of merit by the College, were awarded in the different branches

of study as follows :—Horse pathology (written examination)—Gold medal (Principal M'Call)—Mr. Henry Rogers, jun. Silver medal (H. & A. S. of S.) —Mr. Hugh Bradley. First-class certificates—Messrs. Freeman, Roberts, Gosling, Macadam. Second-class certificates—Messrs. Taylor, Pettigrew, and Nisbet. Cattle pathology (written examination)—Gold medal (Principal M'Call)—Mr. John Freeman, jun. Silver medal (H. & A. S. of S.)—Mr. Henry Rogers, jun. First-class certificates—Messrs. Gosling, Roberts, Macadam, and Bradley. Second-class certificates—Messrs. Taylor, Pettigrew, Crighton, and Thomas Maclay. Practical examination of horses as to soundness, age manipulation, etc.—Gold medal (Principal M'Call)—Mr. R. Roberts. First-class certificate—Mr. J. Wright. Second-class certificates—Messrs. Macadam and Freeman. Practical examination of cattle and sheep as to age, operations, etc.—Gold medal (Robert Walker, Esq.)—Mr. John Freeman, jun. First-class certificates—Messrs. Watt, Rogers, and Cochrane. Histology and Physiology—Silver medal (H. & A. S. of S.)—Mr. W. A. Macgregor. First-class certificates—Messrs. Kelly and Gemmell. Second-class certificates—Messrs. Brown, Dickie, Hayes, Hughes, Martin, and Renfrew. Anatomy (special and comparative)—Silver medal (H. & A. S. of S.)—Mr. J. Renfrew. First-class certificates—Messrs. Hughes and Macgregor. Second-class certificates—Messrs. Martin and Gemmell. Anatomy (Jun.)—First-class certificate—Mr. J. Laithwood, Congleton. Second-class certificates—Mr. J. Holland, Dublin, and Mr. T. Marriott, Shrewley, Warwick. Best oral examination on anatomy, histology, and physiology—Gold medal (Professor Allen Thomson)—Mr. W. A Macgregor. Science and practice of agriculture—Silver medal—Mr. Alexander, Glasgow. First-class certificate—Mr. Jas. Rogers, Arbroath. Agricultural chemistry —First-class certificate—Mr. Alexander. At the close of the examinations the president of the Royal College of Veterinary Surgeons (Mr. George Fleming) intimated that Mr. W. A. Macgregor had passed with "Very Great Credit," and Messrs. Renfrew, Gemmell, Kelly, Bond, Hughes, Maguire, Freeland, Martin, Shand, Freeman, Rogers, Gosling, Cochrane, Macadam, and Bradley, with "Great Credit."

NEW VETERINARY COLLEGE, EDINBURGH.

THE winter session of this college terminated on Monday, April 25th, when the medals and certificates were presented to the successful students as follows :

The annual prize of £20, awarded by Professor Williams to the student who passes the best first and second professional examination, was gained by Mr. Woods, of Wigan.

Mr. Woods also succeeded in winning the gold medal for practical knowledge, awarded by the Highland and Agricultural Society at the examinations for its veterinary certificate.

Equine Pathology.—Medal : Mr. Woods, Wigan. Certificates : Messrs. Osgood, Springfield, U.S.A. ; Leather, Liverpool ; and Martin, Chesterfield.

Bovine Pathology.—Medal : Mr. Woods. Gertificates : Messrs. Leather and Osgood.

Anatomy.—Medal : Mr. Finlayson, Gourock. Certificates : Messrs. Hood, Edinburgh ; Edmondson, Lyttsam ; and Dalling, Liberton.

Physiology.—Medal : Mr. Greenhalgh, Leeds. Certificates : Messrs. Hood and Finlayson.

Chemistry.—Medal : Mr. Gresty, Tattenhall.

Medal given by the Edinburgh Veterinary Medical Society for the best essay on "The Diagnosis of Disease :" Mr. Dickinson, Boston.

ONTARIO VETERINARY COLLEGE.

THE session of this College terminated on March 30th, when diplomas and prizes were presented to the successful students. The Hon. Adam Crooks, Minister of Education, the Mayor, Professor Buckland, Drs. Barratt and Duncan, and other gentlemen took part in the proceedings.

A large number of students had presented themselves for examination. The official Board of Examiners consists of the following gentlemen :—W. Cowan, Galt ; A. O. F. Coleman, Ottawa ; J. Cæsar, Port Hope ; J. T. Duncan, Toronto ; C. Elliott, St. Catharines ; C. H. Sweetapple, Brooklyn ; J. H. Wilson, London ; and Dr. Thorburn ; the Board being assisted in their duties by Dr. Barrett, T. Loyd, Newmarket ; E. Hagyard, Lexington, Kentucky ; E. Grange, Guelph ; J. O. Neil, London, and others.

The names of those who succeeded in passing are as follows :—T. Ashe, W. B. Austin, A. H. Badgerow, F. Brooks, D. Burt, J. S. Butler, L. Carley, W. Cain, C. C. Crane, F. Daly, D. L. Devore, J. A. Dell, J. Ferguson, C. M. Gustin, S. L. Honiford, Wm. Huntsberger, W. A. Labron, G. F. Lount, W. E. Langford, A. Logan, A. Maguire, H. McIlroy, H. Owens, W. Rose, G. W. Thomas, E. Wells, W. Shaw, W. J. Somerville, W. Steele, C. A. Woodford, J. White.

The following is a list of the seniors who were successful in gaining prizes :—

Pathology.—J. A. Dell, Silver Medal, presented by the Ontario Veterinary Medical Association ; J. S. Butler, A. Logan (equal), 2nd Prize. Honours—A. Badgerow, D. Burt, F. Brooks, F. Daly, C. Gustin, E. Honiford, W. Shaw, E. Wells.

Anatomy.—Silver Medal, presented by the Agriculture and Arts Association, J. S. Butler ; 2nd Prize, J. A. Dell ; 3rd, A. Logan, W. Shaw (equal). Honours—J. Calder, W. Langford, A. Maguire.

Entozoa.—Prize, J. A. Dell. Honours—T. Ashe, J. S. Butler, D. Devore, A. Logan.

Physiology.—1st Prize, J. S. Butler ; 2nd, J. A. Dell ; 3rd, W. Langford. Honours—T. Ashe, E. Wells (equal), J. Calder, F. Brooks.

Materia Medica.—1st Prize, J. S. Butler ; 2nd, J. A. Dell. Honours—A. Maguire, A. Logan (equal), T. Ashe, W. Shaw, D. Devore, E. Wells.

Microscopy.—1st Prize, J. S. Butler. Honours—T. Ashe, F. Daly, W. Langford, E. Wells.

Breeding and Management of Live Stock.—1st Prize, books to the value of 20 dollars, presented by the Hon. Commissioner of Agriculture, J. S. Butler ; 2nd, books to the value of 15 dollars, presented by the Agriculture and Arts Association, D. L. Devore ; 3rd, books to the value of 10 dollars, also by the Arts Association, J. A. Dell.

Gold Medal, presented by the Ontario Veterinary Medical Association for the best general examination, J. S. Butler. Honours—T. Ashe, J. A. Dell, A. Logan, W. Shaw, E. Wells.

The prizes were presented by the Minister of Education, who complimented the Principal of the school—Professor Smith—on the great services he had rendered agriculture in Ontario by founding and conducting the College, and otherwise. He also alluded to the success of the College, and the efficiency of its graduates.

Similar addresses were delivered by the Mayor, Alderman Coleman, Professor Buckland, and others.

Army Veterinary Department.

Gazette, April 26th.

VETERINARY DEPARTMENT.—Veterinary Surgeon, First Class, H. Dawson, from half-pay, to be Veterinary Surgeon, First Class. Veterinary Surgeon, First Class, C. G. H. Reilly is placed on temporary half-pay on account of ill-health.

The Principal Veterinary Surgeon had the honour of receiving an invitation to the official dinner given by the Secretary of State for War, on the occasion of Her Majesty's birthday, May 28th.

The annual dinner of the officers of the Army Veterinary Department will take place at the Criterion Restaurant, Piccadilly, on June 17th, at 8 o'clock. Names to be sent in to the Inspecting Veterinary Surgeon, Aldershot.

The Instructor at the Army Veterinary School, Aldershot, will be glad to receive specimens (dry) for the museum of the school, from colleagues at home or abroad.

Obituary.

THE death is reported of one of the oldest members, if not the oldest member of the profession, James Child, of Hackney, on May 7th, at the advanced age of 82 years. He graduated in 1818, and served the office of Vice-President of the Royal College of Veterinary Surgeons in 1848. Age had compelled him to retire from the active duties of his profession some years ago, though up to his death his mental faculties remained unimpaired. Much respected in Hackney, an almshouse for twelve aged persons, which he built there about ten years ago, will be a lasting memorial of him in his native parish.

The death is also announced of William Lyon, of Forfar, N.B., another old member of the profession, he having graduated in 1833. He was at one time a member of the Scottish section of the examining board of the Royal College, and in 1877 was elected one of the Foundation Fellows.

Frederick Saintey, of Cottenham, Cambridgeshire, a graduate of 1855, is also reported as dead.

We have likewise received intelligence of the death of Frederick George Heap, of Melton Mowbray, a graduate of 1874. The *Leicester Advertiser* has the following notice of the melancholy event :—

"It is with regret we have to record the death of Mr. F. G. Heap, V.S., of this town. The deceased was a well-known cricketer, often figuring in the Melton, Billesdon, and other teams to advantage. His good nature and kind disposition gained for him many friends in his own neighbourhood and in the county. Prior to obtaining his diploma at the London Veterinary College he had been a pupil in Leicester, and in his profession possessed more than an ordinary amount of ability. He was always ready to render assistance in any case of emergency where his aid was required."

Jurisprudence.

CONTAGIOUS PLEURO-PNEUMONIA.

CHELMSFORD COUNTY COURT.—Before Judge ABDY.—April 14.

FREDERICK SMITH, veterinary surgeon, of Ingatestone, *v.* Peter Fry, farmer, of the Dairy Farm, Blackmore.—This was an action to recover the sum of £9 10s. for cattle medicine and attendance upon cattle. There was a counter-claim by the defendant for £10 as damages, owing to the alleged negligence of the plaintiff.

Mr Robertson, of Billericay, and John Street, Adelphi, was for the plaintiff, and Mr. W. R. Preston for the defendant.

Mr. Preston admitted the plaintiff's claim, and at once proceeded with the defendant's counter-claim. Mr. Preston said the actual loss sustained by the defendant had been something like £1,200, for owing to the advice of the plaintift a cow which turned out to be suffering from Pleuro-pneumonia was placed with a large herd of cows, all of which became affected. When applied to for payment of the plaintiff's account, Mr. Fry said, "I will never pay it unless a court of law compels me to, as my loss through you has been so enormous," and he asked him, if he intended to take proceedings to recover it, to do so at once. But the plaintiff abstained from doing so until after the death of Mr. Brooks, of Ongar, who, with Mr. Baker, of Chelmsford, was called in to examine the cow. The law upon the subject was that if a man acted to the best of his skill and ability he would not be liable. If a farmer chose to employ an ignorant man, and he did his best, it might be that he would not be liable. But in this case there was a very great exception. The plaintiff's attention was absolutely called, not once or twice, but four or five times to the fact that the cow was suffering from Lung Disease. In the face of that he told the defendant that there was not the slightest danger, and that it was his duty to take the animal to the home farm where it would be warm and receive more attention. Mr. Fry had refused to pay this bill from the first, and he thought it was very wrong of the plaintiff to wait until Mr. Brooks died before he brought his action. Mr. Preston then called Mr. Fry, the defendant, who deposed: I had close upon a hundred cows at the end of 1878, and supplied milk for the London market; I remember the cow in question, which was attended by Mr. Smith; it was taken ill, as we thought, with cold, on the 4th of December, and I sent for the plaintiff; it was then at an off-hand farm, away from the biggest herd. Two or three days afterwards I saw the plaintiff and asked him what was the matter with it; he said he could hardly tell then, but it appeared to have a bad cold, and he could cure it. He came every day to see the cow, and a day or two later he said, "That cow wants proper nursing; she will require two quarts of beer a-day and some gruel." I said it would be rather risky sending beer to the off-hand farm, as very probably the cow would not get it. He said, "Then you had better take her home." I asked him several times if there was any contagious disease upon the animal, and he said a great many times, "There is not," and he told me I could take the cow home and rest quite contented that there was no "catching" disease about it; the plaintiff knew I had a large herd of cows at my home farm, as he had been my doctor nine years. In consequence of what he told me I took the cow home; a few days afterwards the same disease broke out among the herd at the home farm, and also among the cows on the off-hand farm from which the cow was brought. I was certain something more was the matter with the cow, and I sent for the late Mr. Brooks, of Ongar, and he called in Mr. S. Baker, of Chelmsford; in consequence of their visit my farm became declared an infected place; I am

now positive from my experience that the cow was suffering from Lung Disease. I had several conversations with Mr. Smith with reference to this account, and I always refused to pay, as he had crippled me for life: I invited him to take these proceedings. Mr. Brooks died suddenly four or five months ago, and shortly afterwards I received the summons. I claim £10, but that in no sense represents my loss; the cow I have been speaking of cost £20, and I was allowed £15 by the county authority. Mr. Brooks said on seeing the cow that it ought to have been killed a week before; I lost every cow except twelve, which were on another little off-hand farm, in consequence of this disease.

His Honour: Then your loss has been more than £10?—Mr. Fry: More than £1,000, your Honour.

Cross-examined by Mr. Robertson: The cow first showed symptoms of cold on the 1st December; it had not been suffering from cold for several weeks; I never had a case of Pleuro-pneumonia before; there were forty-two cows at the home farm when this was taken there, but it was not isolated because Mr. Smith assured me there was no danger; I have suffered directly and indirectly a loss of more than £1,200.

Mr. Robertson: Why haven't you brought an action, then?—I told him if he summoned me for the bill I should defend it, but I never would pay.

You say you have suffered a loss of £1,200, and you set up a counter-claim for £10. Why haven't you brought an action for that sum?—I was instructed by Mr. Preston in the matter; I should have let the matter drop if plaintiff had not brought this claim; I do not think Pleuro-pneumonia is difficult to detect; I should recognise it at once. I did not write to Mr. Smith to give him an opportunity of being present at the *post-mortem* examination of the cow, because I did not know it was to take place; when the place became declared infected the animals were taken out of my hands. On the 19th of December Mr. Smith said, "This is a 'lunger'; you had better send for Brooks." I replied, "Good gracious, why didn't you let me know that before?"

Re-examined: I had seventy-five cows killed and buried.

Mr. S. Baker, M.R.C.V.S., of Chelmsford, said: I saw this cow and found her suffering from Contagious Pleuro-pneumonia; it was not a proper thing to bring the cow from the off-hand farm in the state it was when I saw it; in my opinion any one of ordinary care and skill ought to have detected the disease as soon as the cow was taken ill.

Cross-examined: Pleuro-pneumonia is not a difficult disease to understand, and should be recognised at once by any one who knows his business; I cannot say that Mr. Clement Stephenson is an authority; I do not agree with Stephenson that Tubercules might be mistaken for Pleuro-pneumonia, but the symptoms are something alike; it is not difficult to distinguish between the two to an experienced man; usually it is a very quick disease, but sometimes, according to the constitution of an animal, it hangs about.

Re-examined: I have had great experience in Lung Disease, and am the author of a work upon it.

This completed Mr. Fry's case.

Mr. Robertson said he must ask for an adjournment because the defendant's cowman was not produced. He was the man who first saw the plaintiff and to whom the plaintiff gave his instructions.

His Honour said the plaintiff should have subpœnaed the cowman. He could not grant an adjournment because plaintiff had neglected to do this.

Mr. Preston expressed his readiness to consent to an adjournment upon payment by the plaintiff of the expenses.

His Honour: I admit that this is a very serious case. If I adjourn the case I should allow the defendant to increase his claim for damages.

Mr. Robertson said the plaintiff would proceed with the case. Mr. Robertson then submitted as a point of law that the damages relating to the cows which had been killed were too remote. If the plaintiff in the counter-claim was entitled to recover anything at all, he was simply entitled to recover in respect of the one cow. A man was only entitled to recover for actual negligence, and the actual negligence here was confined to the one cow.

His Honour: They say that in consequence of this cow, while suffering from a dangerous disease, being brought to another herd, the whole herd was infected. I don't see how that can be too remote. It is all connected together.

Mr. Robertson: Suppose these cows had not been there?

His Honour: Then the mischief would not have happened.

Mr. Robertson: Whose fault was it the cattle were there?

His Honour: Not the fault of the defendant. The cows were there, where they had always been, and this animal was brought to them. If it was brought to them by the advice of the plaintiff and the loss occurred in consequence, I cannot see how that loss is too remote. The conclusion I have to draw is whether the plaintiff was to blame for advising the defendant to take this cow to that place. If you can show that the cow was not suffering from Pleuro-pneumonia, or that it was in such a state that a man of ordinary experience and skill could not detect the disease, that would be a very good defence for you. If what they have said is true, that this cow was suffering from that disease, and that it ought to have been detected by a man of ordinary experience, and that it ought not to have been moved, your client would have to bear the consequences, and I cannot say the damages are too remote. If the defendant's story is true, he has suffered a good deal more than £10 through your act.

Mr. Robertson then commented on the fact that although the defendant put his loss at £1,200 he had never brought any action against the plaintiff until this counter-claim for £10. He then called

Mr. Smith, the plaintiff, who deposed: I have been in practice twenty years, and have had considerable experience. On the 4th December Mr. Fry came and asked me to look at a cow; when I went to see it it was getting dusk and the cow was being milked. I examined it and found that both lungs were affected; it was a chronic Lung Disease; some of the symptoms were very much like those of Pleuro-pneumonia. I gave certain directions to the cowman; I told him to tell Mr. Fry to move the cow from the others. I saw the cow again the next day, and it was then at the home farm in a stable by itself in a different yard from the other cattle, and a very suitable place I thought for the case; I attended it there every day from the 4th to the 18th. I did not say to defendant, "She's a lunger, and you had better send for Brooks;" I did not advise him to send for Brooks, and did not know he had been sent for. I did not say, "She appears to have a cold, but I can cure her." She was not moved to the home farm by my advice.

By his Honour: I advised beer, but not until the cow was at the home farm.

By Mr. Robertson: I sent in the bill every year, but Mr. Fry never spoke of his loss, or said that he should hold me responsible for it, and I believe that is a suggestion of Mr. Preston's [a laugh]. When I asked him last October whether he could oblige me with a cheque he used abusive language and said he would not pay it; I went to his house afterwards and told him I should have to put it in the County Court, and he said, "If you do I will employ Preston and do you all the harm I can."

Cross-examined: The cow was not at the off-hand farm up to the 7th.

Mr. Preston: Did you know it was suffering from Pleuro-pneumonia?—

No, I don't believe it had Pleuro-pneumonia at all; it had Lung Disease, and if it had been placed in the same shed with other cows there would be danger of the disease spreading; Mr. Fry never said I had no right to send the cow down to the homestead; I did not summon defendant before because he never refused to pay the money until October last.

Why were the proceedings allowed to stand over for three years, until Mr. Brooks was dead?—Because I did not know that Mr. Fry would refuse to pay; my opinion is that both Mr. Baker and Mr. Brooks were wrong, and that the cow never had Pleuro-pneumonia.

Mr. Preston: If it was not Pleuro-pneumonia, how do you account for the fact that all the cows on this farm died from this disease?

His Honour: I have no evidence that they died from that.

Mr. Preston said he must ask that the case should stand adjourned, so that he might call the cowmen, who would prove that the plaintiff never saw Mr. Fry for the first three days, and that the cow was not moved to the home farm for some days after the plaintiff first saw it.

His Honour: If the plaintiff has been telling me what is false he ought to be indicted, and if you have the cowmen to corroborate the defendant's statement that course is open to you. I have made up my mind to find a verdict for the plaintiff.

Mr. Preston: That is what we shall do. We will apply for a summons and have the two cowmen, and prove conclusively that the cow was on the off-hand farm five days after it was first seen by the plaintiff.

His Honour: That will not come before me. I have not the slightest doubt about how my verdict must be. I think the plaintiff has made out that the cow was moved behind his back and without his knowledge, and that he was not in the least aware that it would be at the home farm. His Honour added that if the fatal disease which, according to the defendant, struck down his herd, arose from this cow, he had no evidence to satisfy him that this was the case. It might have been spead by some of the other cows; it might have been caused before this cow went to the home farm. There was no evidence that the plaintiff had been negligent. He thought the cow was sent to the home farm unknown to the plaintiff, and therefore he gave judgment for the plaintiff for the amount claimed and costs, and found that the counter-claim was not made out. If there was a case for indictment for perjury, he had nothing to do with it, and an indictment was the best way of settling matters of that sort.

Mr. Preston: There is, your Honour, and that is the way we will settle it.

Parliamentary Intelligence.

House of Commons, May 3rd.

CATTLE DISEASE.—Mr Arnold asked the Vice-President of the Council whether his attention had been called to the fact that £44,999 was paid last year by local authorities as compensation for animals slaughtered; that, in the opinion of the Veterinary Department of the Privy Council, this addition to the cost of meat "might be easily prevented by a proper system of investigation," inasmuch as that department had reported that "a large number of animals are slaughtered every year on account of disease from which they are entirely free." Whether, with regard to the sixty-three sheep reported to have been infected with Foot-and-Mouth Disease in a total of 66,722 imported sheep last year from the United States, he could state what was the number of cargoes of which these sixty-three sheep, or any of them,

formed part; and whether, having regard to the very serious decline in the importation of sheep from the United States—from 119,350 in 1879 to 66,722 in 1880—in consequence of the Order in Council of November 28, 1879, and to the impossibility of this disease being latent in a cargo arriving healthy after a voyage from America, he was prepared to advise the Lords of the Council to reconsider the terms of that Order.

Mr. Mundella said his attention had been drawn to the amount (£44,999 1s. 3d.) paid last year by local authorities on account of animals slaughtered under the Act of 1879. The amount in the previous year was £65,049 18s. 6d. It is the opinion of the Veterinary Department that the saving would have been greater if a careful inquiry was instituted by the local authority in the case of every outbreak, and if in all cases of slaughter a *post-mortem* examination was required. The sixty-three sheep referred to formed part of eight cargoes. The subject of relaxing the Order as to American sheep, etc., has been carefully considered by the Privy Council, and the difficulties in the way of doing this with safety have been found to be insuperable. Sheep are brought in the same vessel with cattle and swine, and it might well happen that the sheep might remain uninfected until on the point of being landed, and only develop the disease after they had been allowed to go inland. If, on the other hand, they should develop the disease in a landing-place for foreign animals, although it is true that the whole cargo would be slaughtered, it is equally certain that the animals which have been landed there from other countries whose animals are not subject to slaughter would be exposed to the infection, in which case they would also have to be slaughtered instead of being allowed to go inland as they are entitled to do. Under these circumstances we regret that we cannot advise any relaxation of the terms of the Order which applies to the United States.

House of Lords, May 16th.

AMERICAN IMPORTATIONS.—Lord Stanley of Alderley asked Her Majesty's Government whether they would prohibit the importation of American hams, of which a large proportion were infested with trichinæ and bacilli, also of such oleo-margarine or butterine as contained the grease of pigs suffering from the new disease of swine at Chicago, and the fat of horses infected with disease, or such as was adulterated with soapstone.

The Marquess of Huntly said he could assure the noble Lord that there was no established case of American hams being infected with trichinæ, and there had been only one case of infection by bacilli. The Local Government Board had issued a circular to all the sanitary authorities of the country pointing out the precautions to be adopted in the cooking of pig's flesh, and there was no reason to suppose that their advice had not been acted upon. As regarded the second part of the noble Lord's question, there was no reason to believe that oleo-margarine or butterine was injurious to health. If it were sold as butter, and was not butter, an offence would be committed under the Sale of Food and Drugs Act; and if it were injurious to health the seller could be prosecuted under section three of that Act. The effect of prohibiting the importation of oleo-margarine or butterine would, it was feared, be to prevent the importation of foreign butters altogether.

House of Commons, May 16th.

DISEASE IN IRISH CATTLE.—In reply to Mr. Lea, Mr. Mundella said there was no justification for the alarm which at present existed as to the importation into this country of cattle from Ireland alleged to be diseased. There had been no Foot-and-Mouth Disease in Ireland since October, 1880, and there had only been a residuum of Pleuro-pneumonia very much less in extent than that which existed in this country. He only wished that English cattle were in as good a sanitary condition as Irish cattle.

Notes and News.

BOVINE PRECOCITY.—Captain Russell, F.R.C.V.S., sends us the following:—Robert Wyles, Esq., of Little Poulton, two miles from Grantham, has a heifer (thoroughbred Alderney), born May 18th, 1880, which presented him with a nice calf on the morning of the 26th April, 1881. This heifer was turned out, as a calf, to pasture with other calves, some cows, and a shorthorn bull. Both mother and calf have gone on well.

THE MEDICAL ACTS.—A recent *Gazette* publishes the names of the Royal Commissioners appointed to inquire into the Medical Acts, which appeared in the papers recently. The Commissioners are to inquire into the grant of medical degrees and diplomas by universities, colleges, and bodies in the United Kingdom, and into the skill and knowledge which such degrees or diplomas represent; and also into the manner in which medical practitioners are entered in and are struck off the Register of Medical Practitioners; and further, into the constitution, functions, powers, and procedure of the General Council of Medical Education and Registration, and their relation to universities, colleges, and bodies, and to the medical profession.

LYONS VETERINARY SCHOOL.—There has been a serious disturbance at this school, the students having broken out in a state of open mutiny. Several complaints had been received from the pupils, displeased at the excessive severity of the rules and regulations, and annoyed by the ultra-clerical ideas propounded by one of the professors. They demanded that the master should be removed from his post; and when the principal declined to comply with their terms, they sent him their ultimatum, and then barricaded themselves in the dormitories. Summoned to surrender, they replied by singing the "Marseillaise" and breaking the furniture, which, with the beds, they flung out of window into the street. The military had to be called on to aid in restoring order, and now the school is to be closed and the 167 students rusticated.

EFFECTS OF LIGHTNING.—Some idea of the energy that is quiescent in a dewdrop may be gathered from the remarkable case of lightning-stroke just reported from the Cape of Good Hope—a case unique in military annals. Towards the end of last year, while the Diamond Field Horse were on the march to the scene of operations in Basutoland, a terrific thunderstorm broke over them. The rain fell in sheets and the lightning appeared to be continuous. At last a tremendous flash struck the troop, flinging seventeen horses with their riders to the ground, and killing ten men and five animals on the spot. The remaining seven men were dangerously stunned, and it was long before their animation could be restored. Their clothes were torn to shreds by the force of the discharge, and the metal bits and stirrup-irons were discoloured.

TRICHINOSIS.—M. Leclerc, meat inspector, has found trichinosis in pork arrived at Lyons from New York. There were in all fifty cases of American pork, weighing about 13,000 kilogrammes—quite sufficient, therefore, to poison even so large a population as that of Lyons. This alarming discovery has revived, to some extent, the question of organising special means of supervising the pork, bacon, etc., sold as food to the public. At Crepy Valois, in the department of the Oise, Dr. Jolivet observed an epidemic trichinosis in 1879, and several cases ended fatally. Yet in spite of these facts, it has become a sort of fashion to treat this malady as a disease from which the French consider themselves exempt. The French, it is said, are such good cooks that there is no danger of trichinosis.

Dr. Redmond, of Dublin, writes on February 9th to *The Freeman's Journal*,

stating that in the dissecting-room of the School of Medicine a male subject presented all the muscles infected with myriads of trichinæ. "Whether this man had been an inmate of either of our unions for any length of time, or a stranger who, being unwell, sought admission, is a matter that demands the immediate consideration of the guardians of the poor."

SWINE DISEASE IN AMERICA.—A telegram from Washington, of May 16th, informs us that "the conclusions arrived at by the State Department after investigating the reports circulated concerning the prevalence of Hog Cholera are officially published to-day. The report declares that American swine belong to the purest breeds and are fed principally on corn, and that the percentage of deaths from diseases among them is no greater than in Europe. The system of inspection of hog products is so nearly perfect that it is impossible for diseased hogs to pass into the provision markets. It is further declared that the reports circulated in Europe concerning the prevalence of Cholera among American hogs are gross exaggerations, and Trichinosis is an almost unknown disease at Chicago and Cincinatti, the two greatest pork consuming centres in the world." After our experience of similar statements by this department with regard to Contagious Pleuro-pneumonia and other maladies, the above declaration must be accepted with reservation.

AUSTRALIAN EXHIBITIONS.—We are pleased to observe that Messrs. Arnold and Sons, veterinary instrument makers, have been awarded the Gold Medal at the Melbourne Exhibition, for excellence of manufacture. The same firm have likewise received the First Award at the Sydney Exhibition.

Correspondence, etc.

THE ARMY VETERINARY SCHOOL.

DEAR SIR,—As Mr. Penhale's letter with reference to the Army Veterinary School, which appears in this month's Journal, is calculated to mislead, perhaps create a certain amount of unnecessary alarm, I shall feel obliged by your kindly inserting the following reply, trusting it will be sufficiently explicit to enable that gentleman not only to "clearly comprehend" the object, but also to "see the utility" of that institution.

Mr. Penhale alludes, in the first place, to the course of instruction given to farrier-majors and farriers, and compares it with the Highland and Agricultural Society's certificate system. Why, I am at a loss to understand, because there is not the slightest similarity between the two. He furthermore prophesies that the "School will prove as prolific a source of quackery, and quite as obstinate to deal with, as any past or present."

Now this sweeping assertion, coming from a gentleman who, by his own confession, knows nothing whatever respecting the establishment, interior economy, or ultimate object of the Army Veterinary School, is, to say the least of it, astonishing. If any grounds for apprehension existed, I should not have been so much surprised at Mr. Penhale's remarks with reference to the farriers' class; but as it is, I fail to see that the fact of these men receiving a two months' course of instruction on subjects which bear directly upon their daily duties, is in any way calculated to enable them in after life to compete with or injure the regular practitioner, any more than the teachings given to hospital dressers and dispensers are likely to damage the reputation or interfere with the practice of the human surgeon or physician.

Mr. Penhale is probably not aware that farrier-majors and farriers have, besides the ordinary work of their trade as shoeing-smiths, very many important duties to perform connected with the cure and management of sick and lame horses, and frequently when in charge of small detachments, where skilled veterinary advice is not always available, these men have to think and act for themselves.

Such being the case, it is obvious that a systematic course of instruction is not only advisable, but is a matter of urgent necessity, and for this purpose the "farriers' class" has been established. It supplies a want that has long been felt, and will, without doubt, eventually prove to be of the greatest benefit to the mounted branches of the service generally.

With reference to the second "danger" which Mr. Penhale refers to, viz., "the officers' class," it is merely necessary for me to remark that the subjects taught are those which in these progressive days it is important for every officer in a mounted regiment or corps to be conversant with, and that the course lasts for one month; so that although much useful information may be imparted even in this limited period, it is scarcely calculated to "open the road to veterinary qualification," as Mr. Penhale suggests.

In the address read before the Lancashire Veterinary Medical Association last February, and which is reported in the April number of the Journal, Mr. Lawson alluded to the "Army Veterinary School" in liberal and graceful terms. He has had an opportunity of becoming personally acquainted with the system established, and I thoroughly endorse his remarks with reference to the great interest taken in the "School" by the officers attending the various classes, and also to the fact that the "School has already greatly raised the opinion of the officers of the Army as to our profession."

Yours very truly,

W. B. WALTERS, V.S. 1st Class, A.V.D.,
Instructor, Army Veterinary School.

Aldershot, *May 9th*, 1881.

DEAR SIR,—In your last number, Mr. Penhale, one of your correspondents, is pleased to say he was interested and instructed in the address I read, as President of the Lancashire Veterinary Medical Association, at the meeting in February, but he takes exception to that portion relating to the Army Veterinary School. He says, "We are told that lectures are given to farriers and farrier majors, certificates being awarded showing they have attended such lectures." I think if he will again look over my address he will find I never said anything of the kind, as there were neither farriers nor farrier majors present when I had the pleasure of listening to Mr. Lambert's discourse on the various grasses suitable and unsuitable for the horse's food. Still I should be glad to see these men admitted on the same grounds that we have trained veterinary nurses. Why not veterinary nurses in the army as well? It can be but a smattering of knowledge they will obtain, as regiments usually stay a year, or at most two, at Aldershot, and the course of lectures is so varied, going into shoeing, botanical plants, including all poisonous and other grasses, food, ventilation, and a host of other subjects, that, in my opinion, both officers and men would have to attend many years before they could attempt to practice quackery. The truth of the old adage, "A little knowledge is a dangerous thing," is fully felt by the officers who have attended the course, as they acknowledge they are more chary of giving advice, and more eager to call in the aid of a veterinary surgeon, since they knew something of our science.

Believe me, faithfully yours,

Manchester, *May 13th*. ALEXANDER LAWSON.

CRUELTY AND THE VETERINARY SURGEONS' BILL.

SIR,—As an officer of the Royal Society for the Prevention of Cruelty to Animals, my duties often bring me in contact with members of the veterinary profession; and in their interests, as well as that of the Society to which I am attached, I beg, sir, to briefly relate a case which recently received investigation at my hands, and which only endorses the views expressed in your columns, viz., that qualified veterinary surgeons should be protected by statute from the illiterate practitioners that swarm the country, and very often inflict upon dumb creatures nothing short of absolute torture. The facts are these:—A quack residing at Pouxey, near Ruabon, North Wales, induced the owner of a three-years-old pony to allow him to remove from over the animal's left eye a small wart. The means that he employed was arsenic, which he rubbed into the wart, repeating the administration at different intervals extending over a period of nine weeks. The result was that the pony's wart was transformed into a swelling, a thick film gathered over the eye, and eventually the eye itself protruded from the socket and sloughed away. What this poor animal suffered can better be imagined than described. The left side of the face was quite denuded of hair, and the very sponge used by the quack for wiping the animal's face rotted away.

When I called upon the man for an explanation, he pretended ignorance of the ingredients used by him, but boastfully paraded his long experience and having "doctored horses for forty years."

Now, sir, comes the sequel to this gross act of cruelty. When I applied for a summons to bring this man before the justices to answer a charge of cruelty, I was informed that there was no law to prevent a man from acting as a veterinary surgeon, and that in the present instance the man started with a good motive, but the result of his treatment had exceeded his anticipations, therefore he could not be accused of intentional cruelty. If this is the case, empiricism which fosters the worst phases of cruelty, is protected by the law, as the above case shows. Trusting I have not trespassed too much on your valuable time. I am, sir, your most obedient servant,

CHARLES H. THOMPSON,
Inspector, R.S.P.C.A.

Wrexham, *April 22nd.*

THE ARMY VETERINARY DEPARTMENT.

SIR,—Will you kindly grant me a little space in which to answer "Pferd's" remarks in your last issue? If that gentleman will refer back to the VETERINARY JOURNAL for September, 1880, he will there find, under the heading "Army Veterinary Department," that if I erred when endeavouring to correct him, I did so in good company, as I presume that you, sir, would not have edited the paragraph to which I refer unless you at least had a conviction as to its correctness at the time; and as both "Pferd's" letter and my correction of it appeared before February, in which month attention was directed, to the misconception then existing, I think little more need be said.

I am glad to see your correspondent "Vetula Avis" drawing attention to the state of affairs in the army. There is no doubt whatever, that things are not in a satisfactory condition; and now that powerful efforts are being made to obtain for quarter-masters and riding-masters very large concessions, including the rank of captain at seven years' commissioned service, we ought to be up and doing. Our relative ranks are positively absurd when compared with those of other departments. In none is that of subaltern retained except on probation; and although we can scarcely hope to obtain the relative rank of captain on appointment, six years' service ought to be ample

to qualify for that rank, fifteen for that of major, giving the relative rank of lieut.-colonel to inspecting veterinary surgeons. The rank of first-class veterinary surgeon might be abolished, as there is absolutely no difference in the duty between the two lower grades. Improved relative rank means considerably increased allowances and a higher military status—two considerations which are worth keeping in sight. At present our allowances, in comparison with service, are poor, and our military status the lowest of any department or corps in the service.

I am, sir, yours faithfully,
"UBIQUE."

NATURA VERA OF BURSATTI AND CANKER.

DEAR SIR,—I am reluctantly compelled to again take up my pen to defend myself in the pages of your Journal, the more so as the nature of the contents of the letter to which I reply clearly shows me that the writer is labouring under some slight misapprehension respecting my former communications, although the censure which he has deemed it meet to award a student whose crime has been to question theories which he considered (by supplying *reason* for all) wrong, and in so doing to open up a freer field for discussion, is somewhat ponderous and scathing. Yet if that gentleman will deign to re-peruse the aforenamed articles, and the communication accompanying this letter, he may see reason, if not to change, at least to modify the sweeping assertions with which he has so plentifully interlarded his disclaimer.

I refrain from noticing the remarks in the first portion of Mr. F. Smith's letter, as they too evidently, to me at least, bear the impress of pique. That private feelings should be sunk in professional and public discussions, is the opinion of members of the sister profession of medicine, an opinion with which all consistent and orthodox practitioners must concur.

Any one suggesting defects in the facts and arguments relating to profession subjects is at once accused, by fastidious men, of attempting to arrest the elucidation of truth, and of interfering with the progress of knowledge. Affectations of cautious reserve have now receded before candour and free thought. Not a few authorities, more distinguished by ingenuity than candour, leave their readers in doubt concerning their real opinion.

Mr. Smith needlessly includes the names of veterinary surgeons Western and Spooner Hart, as I do not wish to detract from the merits of these gentlemen by any remarks of mine on the subject of giving precedency and footing to one of two theories; but it must be here stated that there are few veterinary surgeons in India, if there be one, who have given the subject such deep thought for so many years, and this from a purely scientific point of view, as Mr. George Kettlewell, Senior Veterinary Surgeon, Saharunpore Stud; and he has orally corroborated my views. Dr. Cunningham, whom I have also since consulted, on examining all the specimens of Bursatti and Canker sores prepared by myself, has concurred in my opinion that the microscopic appearance of the sores is that of Epithelial Cancer pure and simple.

Mr. Smith speaks learnedly about the "chemical re-actions" of Bursatti. An affectation of superiority in this branch may influence the minds of the lay community, but thinking members of our profession cannot but be aware of the present crude condition of pathological chemistry. It will indeed be a matter of congratulation when Mr. Smith's apparent aspirations are consummated, and when the professional man can ascertain the nature of any growth by its "chemical re-action." Until our knowledge of this branch of science is vastly extended, we cannot be sanguine of obtaining much or reli-

able information through its intervention. Lest I should appear to lack in resorting to as many methods of obtaining an adequate conception of the nature of the disease-products, I may mention that *kunkurs* have been subjected to chemical examination by me, not, as Mr. Smith may suppose, to ascertain from the results the *nature* of the *growth*, but to make known whether the opinions current as to the composition of these bodies (kunkurs) were borne out by chemical tests: with this object alone were the chemical investigations commenced, and the "re-actions" noted (*vide* VETERINARY JOURNAL, October, 1880).

Mr. Smith has been—we will say—good enough to propound a few queries to which he desires answers. The nature of the questions affords me ample proof that he has been hasty in drawing out his list: all the issues raised by him had been implied, foreseen, and provided for in the afore-alluded articles by me. I shall, however, notice them here, in their order:—

No. 1. *Answer.**—Yes.† Lest Mr. Smith deem this peculiar, and perhaps "abrupt," I would bring under his notice the fact that until within a *very* recent date the presence of kunkurs in *internal organs*, even in Bursatti (Cancer), of the *horse* was not merely questioned, but ridiculed, until ocular demonstrations (and who made these?‡) at last obtained credence for the statement. What is most amusing to find is that Mr. Smith assumes such a dictatorial tone of expression on subjects with which he is so partially acquainted. He has the temerity to set questions *on the occurrence of kunkurs in internal organs*, when, not long ago, he openly acknowledged§ he had never made a *post-mortem* of a single case of Bursatti, and knew nothing at all of kunkurs found in internal organs, although he quietly takes the liberty of becoming a senior author—nay, examiner—on the subject!

No. 2. *Answer.*—There is error and misconception in the mode of Mr. Smith's question. An animal may develop a tumour or sore similar in appearance, and without microscopical examination not differing from that of Bursatti; this, on the irritation which gave rise to its production being removed, as in the winter season, and before cancerous change occurs to any extent, and by the improved status of the animal's system consequent on the approach of winter, may undergo atrophic changes and the animal *apparently* recover.‖ But if the irritation has been or is prolonged, and provided that there exists in the cells of the tissue (not in the system, observe) a predisposition to Cancer metamorphosis, then no such reparative change can or will occur, and a condition is produced which is familiar to all who have had extensive acquaintance with the disease, viz., *sores existing before and persisting throughout the winter as well as during the summer.*¶ And in this I

* The *questions* to these are contained in the last issue of the Journal.

† If Mr. Smith will *carefully* re-peruse my article for October, 1880, he will learn that I have already directed attention to this point, and referred desirous men to pages 193 and 194 of Dr. Green's "Morbid Pathology," wherein they will discover engravings replete with kunkurs. It is necessary, however, to know *what a kunkur is*, before we can appreciate the drawings given allusion to.

‡ I refer Mr. Smith to the VETERINARY JOURNAL for October, 1880.

§ *Vide* VETERINARY JOURNAL, articles on Bursatti, by F. Smith, M.R.C.V.S.

‖ For, note, it is our experience that the disease in these cases as a rule *recurs* with augmented powers of destruction the following summer.

¶ My impression is that Mr. Smith's experience has been confined to the milder cases of the disease. What would he say of cases in which cachexia develops often within the short space of three or four months? His acknowledgments give one the impression he has not come across even one such case. We do not acknowledge that Bursatti properly so-called ever *heals* "*spontaneously*." A *respite* in our opinion does not necessarily constitute a *cure*. Take the opinion of surgeons on human Cancer. "How can we account for the fact that frequently reproduction of Cancer does not take place for years? . . . . . I am convinced that Cancer and other tumours

receive corroboration by the opinions of men who have had over thirty and forty years' experience of the disease in the late Government studs of Poosah, Buxar, Koruntadhee, Ghazeepore, and Hapur.

Not to go farther abroad, I would ask Mr. Smith, as illustrating the vitality of different species, Why does Septicæmia occur so seldom in the horse and so frequently in man, though both be placed under equally favourable conditions for bacterial onslaught? The answer to this question explains why Bursatti in the horse may more readily be aborted than in man.* From this Mr. Smith may gather that what occurs in the horse does not necessarily always follow in man. But not to disappoint Mr. Smith, I may inform him that secondary and tertiary growths in Cancer also occur in *man* in the lungs and other viscera. Why they do not so frequently (for occasionally they do) receive *calcareous deposition* is explained by the absence of the calcific diathesis in man, a diathesis existent in the horse. By *calcific diathesis* I mean the well-recognised "*ossific diathesis*."

So much for Bursatti. Any further information required, not contained in this, may be gleaned by a discriminate study of my descriptions of the disease, taken as a whole, contained in the VETERINARY JOURNALS for October, December, and February last.†

Respecting Lymphadenoma, I have much pleasure in informing Mr. Smith that my experience has surpassed his some twentyfold, taking his experience at his own computation. I should have desired to avoid making such a comparison, comparisons proverbially being odious, but I see no other means of solving the difficulty and satisfying Mr. Smith's curiosity at one and the same time.

I hope, shortly, to be able to give the results of my experience of the disease known as Lymphadenoma through the medium of the VETERINARY JOURNAL, considered more particularly from a pathological point of view.

The relation existing between Canker and Bursatti I also purpose placing before the profession at a future date, when Mr. Smith will have an opportunity of expressing his criticisms.

I am, dear sir,

Your most obedient servant,

Edinburgh, 5*th May*, 1881. RICHARD W. BURKE, M.R.C.V.S.

may remain in a rudimentary or subdued state for an indefinite length of time. In the case of recurrent Cancer we often see that an enlarged gland which is left after the removal of the main tumour will remain quiescent for years, and all will seem well for a time, and that then active growth will set in. The same will take place in a cicatrix which has perhaps remained hard and *apparently healed*. . . . . One of the most remarkable and not very explicable phenomenon is the *arrest* of Cancer growth and the gradual wasting of the diseased mass *per se*" (Dr. Campbell de Morgan, F.R.S., "On Cancer"). From this Mr. Smith will glean that the "spontaneous arrestation" of Cancer growth is not only common in the horse, but also in man. Mr. Smith should be first well versed in the history of *Cancer*, before he can be expected to effectually cope with the subject of "Bursatti."

* Mr. Smith must also bear in mind the fact that the *Epithelial Cancer* is the least malignant and least pronounced of all the cancers even in man. Hence the tendency of the disease to implicate internal organs is, comparatively, the least marked, in man as well as in the horse. But the tendency is altered by various qualifying circumstances.

† No matter what objections Mr. Smith may raise, and in whatever ways we compare "Bursatti" and Cancer, we shall the more and more be assured of the identity of these two. Theoretically and practically considered, they are one and the same disease. It is only when the evidences are *collectively examined* that the *true nature* of the disease (Bursatti) will be forthcoming. The prevailing tendency, however, seems to be in the direction of "chemical re-actions" and the use of the microscope *only*. That these latter are necessary adjuvants we will not for one moment question, but they are not all that is required.

P.S.—Mr. Smith cannot be aware that accompanying my former communication on Bursatti and Canker was a drawing illustrating kunkurs in a case of Canker of the foot of a horse, and which would have appeared in the Journal had the cost of reproduction not precluded. I merely mention this *en passant*, to show the relation existing between Canker and Bursatti, a relation which Mr. Smith apparently derides. A *kunkur*, Mr. Smith must understand, consists in something more than a mere deposition of calcareous matter in *any* newly formed structure. For kunkurs may be of two distinct kinds, one with the other without calcareous deposition. The deposition of calcareous matter is merely one stage of its development, viz., the later stage. The first may be termed a *formative* stage, the second a *degenerative* one. From this, Mr. Smith will understand that there are two distinct stages in the development of a kunkur, and the calcific diathesis only explains the ready development of the last stage.*

A CORRECTION.

SIR,—In Mr. Burke's last contribution to the VETERINARY JOURNAL, headed "Septicæmia following Retention of the Fœtus, the Result of Mal-presentation Discerned *Post-mortem*," he says in a footnote: "The diagnosis of the attending veterinary surgeon being that no foal existed." Does he not remember the *only time he saw the mare alive* was when he and Mr. Stanley met her on the road some time after she ought to have foaled; he was asked whether he could see anything the matter with her, and on his answering "No," was informed by Mr. Stanley that there was a dead foal in her? Such a statement after that conversation is not in itself calculated to inspire confidence in him. I had seen the case very often until the foal was dead, she showing no labour pains at the usual period; and the owner declining to have her interfered with, turned her out for some months, she gaining strength and condition; so at last he put her to work for a week. She was not attended medically or treated in any way during this period, and it was through her death being casually reported to Mr. Stanley and his kindness in giving Mr. Burke and myself the opportunity of seeing the *post-mortem* condition of a case of such unusual interest. This was all the knowledge of the case Mr. Burke possessed.

As to the second case, Mr Courtney's mare aborted, the fœtus never being found; she was sent into the infirmary with slight Vaginitis, treated as described, and has been at work ever since.

I am, sir, your obedient servant,

Warwick, *May 4th.* W. ANDERSON, *Pupil (not Assistant).*

THE CASTRATING ECRASEUR.

DEAR SIR,—I have received five letters from veterinary surgeons during the month, requesting information as to the use of the above instrument, and complaining that in their hands the operation is followed by hæmorrhage. I have visited these gentlemen, and proved to them that their fault lay in the manner in which they manipulated the instrument. Should any other members of the profession be in a similar dilemma, I wish it to be known that I will willingly go and show them how to use the instrument on their paying my expenses, and two guineas daily for time and labour, and will operate on as many animals as time will permit.

Yours faithfully,

Grantham, *May 14th.* BEN. H. RUSSELL.

* Mr. Smith should first *understand* a theory before he attempts to throw ridicule upon it.

PROFESSIONAL MORALS.

SIR,—Now that all hope has passed of getting my motion legally accepted, at least for a year, will you kindly give me space in your columns to enter a little more fully into details. My request at the annual meeting was, "That the Council might define what offences would make a member liable to expulsion;" but as it was rather late when I brought forward my motion, and the meeting was somewhat wearied with the discussion on the Annual Report, many members having left the room, I don't think I got the support I might have had.

Now, with all due deference to you, sir, and to Mr. Collins, my principal opponents, I cannot help thinking that from the exalted positions you both hold, you are not aware to what extent offences exist, and, consequently, are not fair judges of the incalculable mischief done to the credit of the profession by the corrupt practices to which I alluded. Mr. Dollar, in seconding my motion, referred to actual facts in the strongest possible way, and I was ready to produce public records of the contumelious notoriety into which our profession had been brought by the conduct of some of its members. And in one of the papers to which I referred, the editor pledged himself to "furnish the R.C.V.S. with good cause why a certain member should be expelled." In the matter of this letter, you, sir, said the editor, would not supply the desired information; either you were misinformed, or the said editor is not the "truth" he represents to be.

However, proof is not wanting, even of the most venial offences against professional morals, much less against actual dishonesty.

The principal object I had in view was to stop the growing practice of horse-dealing, and everything connected with it, among members of our calling, and I cannot understand how honest men who uphold the maxim of "turning an honest penny any way," can "sail so close to the wind," when they are liable to be classed in the same category as dishonest persons. What, of course, I complain of is the *deliberate* practice of horse-dealing for the purpose of adding to the year's income, and that this "little quiet dealing," although done under the guise of professional routine, is none of the less immoral and prejudicial to our credit as a body. Mr. Collins, in supporting his arguments against my proposition, said the Council could not take upon itself to judge members' conduct, or risk the responsibility of being mulcted in damages; to which Mr. Hunting, in his blunt and honest way, replied it was a timid excuse, and that the position the Council stood in was only that of a club, the committee of which have power to expel any member who conducts himself unworthily as a gentleman. Surely our Council, being that of a scientific and public body, should have equal power; and I submit they have, or at least can make it, and I can only hope they have the will. I conclude by making an appeal to those of our profession who possess that *esprit de corps* so desirable to support my next agitation (I intend to agitate by whatever means I am able); and to those who are lukewarm on the matter, I would say, that although they perhaps take the view "there is a medium in all things," they will also bear in mind, "there are certain limits beyond which rectitude cannot exist."

I am, sir, yours obediently,
HENRY DYER.

P.S.—I refrain from entering further into the question of what are and what are not morals, preferring for the present to leave it in worthier hands.

London, *May 16th*, 1881.

NOTICE.

We have been requested to elicit the opinion of the profession as to whether the amputation of lambs' tails is advantageous or otherwise. It has been maintained, on the one hand, that greater cleanliness is the result of docking, and less danger from maggot; while, on the other hand, the contrary has been asserted, and also a greater liability to certain maladies of the generative organs. Though ourselves opposed to the operation, yet the opinions of those who have greater experience in the matter would be gladly received.

Communications, Books, Journals, etc., Received.

Communications have been received from "Ubique"; A. W. Hill, London; H. Osgood, Edinburgh; Professor McCall, Glasgow; W. Anderson, Warwick; T. Corby, London; J. Macqueen, Glasgow; W. B. Walters, Aldershot; J. J. Meyrick, A.V.D., Woolwich; R. W. Burke, Edinburgh; J. Colam, London; M. Hedley, Dublin; Professor Smith, Toronto; R. Willmot, Edinburgh; C. R. Marking, Toppesfield; C. H. Thompson, Wrexham; G. Evans, A.V.D., Madras; J. Gerrard, Romford; A. B. Daniel, London; E. Stanley, Warwick; A. E. Macgillivray, Banff; A. Lawson, Manchester; W. Broughton, Leeds; J. C. Berne, A.V.D., Cahir; W. O. Williams, Edinburgh; B. H. Russell, Grantham; H. Dyer, London.

Books and Pamphlets: *E. Vogel*, Specielle Arzneimittellehre für Thierärzte; *G. Thin*, On the Trichophyton Tonsurans, On Bacterium Decalvans, On the Absorption of Pigment by Bacteria; Annual Report of the Veterinary Department of the Privy Council; Le Service Vétérinaire dans l'Armée; *N. Lanzillotti-Buonsanti*, Conosci Te Stesso, Della Salubrità e Dell 'Ispezione Sanitaria delle Carni da Macello, Trattato di Patologia e Terapia Chirurgica Generale e Speciale Degli Animali Domestici, Sull 'Organizzazione dei Servizio Sanitario Veterinario in Italia, Sulla Istituzione di una Clinica Ambulante, Die Frage der Veterinär-Medicin in Italien, Viaggio D'Istruzione dei Giovani laureati, etc., Primo Congresso Nazionale dei Docenti e Practici Veterinari Italiani; Message from the President of the United States; Contagious Pleuro-pneumonia; Report of the Cattle Commissioners to Secretary of State Board of Agriculture.

Journals, etc.: *Journal of the Royal Agricultural Society; Wochenschrift für Thierheilkunde und Viehzucht; Thierarzt; Archives Vétérinaires; Recueil de Méd. Vétérinaire; Deutsche Zeitschrift fur Thiermedicin und Vergleichende Pathologie; American Veterinary Review; Archiv für Wissenschaft. und Practishe Thierheilkunde; Repertorium der Thierheilkunde; Mark Lane Express; La Presse Vétérinaire; Agricultural Gazette; La Clinica Veterinaria; Live Stock Journal; Lancet; British Medical Journal; Journal de Méd. Vétérinaire; Farmer; American Live Stock Journal; Sanitary Journal; British Medical Journal; Medical Press and Circular; Annales de Méd. Vétérinaire.*

Newspapers: *Bedford* (Cape Colony) *Guardian; Essex Weekly News; Hampshire Chronicle; Glasgow Herald; Scotsman; Toronto Mail; North Wilts Herald; Bedford* (Cape Colony) *Advertiser; Leicester Advertiser.*

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